COMP 1006 A Fall 2019

MENU

USEFUL LINKS:

culearn (http://www.carleton.ca/culearn)
w3schools (https://www.w3schools.com/)
codecademy (https://www.codecademy.com/catalog/subject/web-development)

COMP 1006 Introduction to Computer Science II

COURSE OUTLINE

Lectures	Mon, Wed 1:00-2:30

Tutorials	Tutorial A1: Thu 2:30-4:00 Tutorial A2: Thu 10:00-11:30 (You MUST attend the session you are registered in) Tutorial grading: tutorials are marked out of 2 marks as follows: 0 marks for no show or no significant progress. 1 mark for partial progress (typically half the exercises). 2 marks for completing or almost completing the exercises. Important: tutorials are meant to be started as homework. You will generally not be able to finish if you only start when you come to the tutorial session.
Instructor	Louis Nel (http://www.scs.carleton.ca/~ldnel)
TA/Lab Co-ordinator	Farah Chanchary HP5331 farahchanchary@cunet.carleton.ca (mailto:farahchanchary@cunet.carleton.ca)

Calendar Description:

A second course in programming 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 BUSI 2402, COMP 1406, SYSC 1101 (no longer offered), SYSC 2004, BIT 2400. Prerequisite(s): one of COMP 1005, COMP 1405, SYSC 1005, ECOR 1606, BIT 1400, CGSC 1005.

Topics:

The course will be taught in the Java programming language. The calendar gives a vague list of topics -here are more details.

Abstraction: In Java, this would include interfaces. Informal analogues would be used in other languages. Students should have a clear understanding of the difference between abstract interfaces and their implementations

Mutable data structures: Students should be proficient in implementing basic linked structures such as lists and trees, including destructive operations

Recursion: Recursive approach to problem-solving; correspondence between recursively defined data and recursion schemes.

Program efficiency: Students should gain familiarity with asymptotic complexity at an intuitive level and be able to identify common patterns of sub-linear, linear and quadratic worst-case running time.

Memory Model: Understand the Stack-Heap memory model as it pertains to primitives and objects in Java and similar stack-based languages

IDE: Using an "industrial strength" IDE for code management, compiling, testing and debugging.

Requirements: Understand of how to translate english requirements and objectives into object-based designs and ultimately code.

Graphical User Interfaces: Create programming solutions that work like apps: GUI or other user interface,

File Access: Storing data on files.

Patterns: Re-enforcing good decoupling and programming patterns.

Textbook:

Course lectures and assignments are based on programming demos available on the website and online sources. There is no official text for the course that you need to buy but you are encouraged to seek out online resources. Some recommended books and web sites will be listed in the resources section of the course website.

Course Material Copyright Notice:

We remind you that lectures and course materials, including power point presentations, outlines, code examples, and similar materials, are protected by copyright. The professor is typically the exclusive owner of copyright and intellectual property of the course materials unless otherwise noted. You may take notes and make copies of course materials for your own private (educational) use. You may not (and may not allow others to) reproduce or distribute lecture notes and course materials publicly for commercial purposes without my express written consent.

This notice has been added, in part, because course content has ended up on public sites like OneClass, Course Hero, or GitHub without permission. Many students are eager to post there work on GitHub but you must be careful not to include copyrighted material.

Software:

You will need the following software for doing course assignments. All software should be freely available and should run on platforms: Windows, Mac OS, Linux. Assignments must be submitted in the format specified and using the course IDE. Solutions in other formats will not graded.

This course will involve quite a lot of programming. You are expected to already be comfortable basic programming concepts (if-statements, loops, functions and procedures). We will be using the object-oriented style of programming which is the style that java supports.

	Software
Programming Language	Java JDK 12.x.x or later (get the latest JDK) see resources section of course web site.
IntelliJ Idea IDE	see resources section of course web site. (https://www.eclipse.org/downloads)
Written Design Assignments	.pdf documents There problably will not be any written non programming assignments, but if there are the submission format must be pdf.
Compression	only .zip accepted. (not rar, or tar, etc.)

Tutorials:

This class has compulsory tutorials that you must attend once a week. The tutorials are an important part of the course and make up a substantial portion of the marks. The tutorial exercises will be posted ahead of time and you are expected to work on them before you come to the tutorial. At the tutorial you will demonstrate your results to the supervising TA's and may be asked to make minor modifications to demonstrate your understanding.

Assignments:

We will be using electronic submission of assignments using Carleton's culearn (https://culearn.carleton.ca) system. Electronic submission enforces strict deadlines. Only assignments submitted through culearn will be graded. No assignments will be accepted late or directly by email or in other forms. TA's are not allowed to accept assignments directly.

Lab/TA Co-ordinator:

We have a lab/TA co-ordinator assigned to this course offering.

The lab coordinator is responsible for organizing and overseeing the tutorial sections of the course and also imposing submission rules to help ensure that marking goes smoothly. If you notice any mistakes within a tutorial, have issues with a tutorial teaching assistant, or have any other tutorial related questions, the lab coordinator should be your first point of contact. The lab coordinator is also responsible for distributing assignments to teaching assistants for evaluation. If you are missing an assignment grade or are unsure about the status of your assignment, you can contact the lab coordinator.

Teaching Assistants:

A schedule for TAs will be posted on culearn and on the course website.

Marking Scheme:

deliverable	value	comment
Tutorials	25%	10 tutorials. Count best 8/10 (completed individually)
Assignments	30%	4,5, or 6 assignments equally weighted You may work in pairs on assignments if you want. Count all but worst one assignment.
Midterm	10%	In class (Thu. Nov. 1 in class). (If your final exam mark is better than the midterm mark, the midterm mark will be replaced by the final exam mark)
Final Exam	35%	Formally scheduled exam during exam period

Missed assignments: You may miss up to 2 tutorials, 1 assignment and the midterm test for medical, compassionate, or other reasons. If you miss more than that a mark of 0 will be used for the missed items when the final grade is computed. We will NOT collect doctor's notes for missed work; if you miss more than the allowed number a mark of 0 will be used for the missed work.

If your final exam mark is better than the midterm mark we will replace the midterm mark with the final exam mark. You do NOT need to supply a doctor's note is you miss the midterm. Midterm or Exam marks will not be used to make up for missed, or poorly done, assignments or tutorials.

IMPORTANT: If you wish to appeal a mark (assignment, tutorial or midterm) you must make the appeal within 10 days of the mark being posted on culearn. After that we will not be obliged to accept appeals or change marks.

Collaboration is encouraged but cheating, or copying, is not allowed. You may work together and consult but any work you hand in must be your own and judged to be unique. Any two assignments judged to be too similar will both receive a grade of 0, and will be handled as a formal academic offence -see calendar for details. If you are working with a partner on assignments you must submit only one copy but have both your names on the assignment.

Course Web Page:

As well as being announced in class, all important information, such as course news, assignments, TA hours, instructor office hours, will be available on the course web page at http://www.scs.carleton.ca/~ldnel/2404fall2019 (http://www.scs.carleton.ca/~ldnel/2404fall2019). It is your responsibility to check this web page frequently for new information and announcements. Paper copies of outlines and assignments will not be provided. We will not send mass emails for routine announcements -emails will be used for exceptional circumstances.

Information on University Academic Accommodations

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

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 the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf (https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

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 the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf (https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

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. carleton.ca/pmc

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 is 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, visit: carleton.ca/sexual-violence-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. https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf (https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf)

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline (https://students.carleton.ca/course-outline)

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 awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Some examples of offences are: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found in the Undergraduate Calendar, Section 14, Page 59.

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.

Unauthorized Co-operation or 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". Please refer to the course outline statement or the instructor concerning this issue.