

**COMP 2401D – Introduction to Systems Programming**  
**Fall 2021**  
**School of Computer Science, Carleton University**  
**Course Syllabus**

## Course information



**Class:** Monday and Wednesday, 6:05 pm-7:25 pm EST (Ottawa time)



**Instructor:**

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**Email:** sana.maqsood@carleton.ca

**Office hours:** by appointment on BrightSpace

## About the course

### 1. What will I learn in this course?

This course will introduce you to system-level programming with fundamental OS concepts, procedures, primitive data types, user-defined types. Topics may include process management, memory management, process coordination and synchronization, inter-process communication, file systems, networking, pointers, heap and stack memory management, and system/library calls.

A course schedule and additional content will be provided on BrightSpace.

*Please note that you MUST earn a C- or better in this course to take some required 2nd/3rd year courses starting Winter 2022.*

### 2. Which pre-requisites do I need?

One of [COMP 1406] or [COMP 1006] with a minimum grade of C- is required to take this course.

### 3. How will the course be delivered?

This course will be delivered online using a blended model. Specifically, course material will be provided via the following:

- [Asynchronous] Pre-recorded videos explaining key concepts (similar to class lectures); these will be available to watch on your own time.
- [Synchronous] Live Q&A sessions offered through Zoom, scheduled during the official class times.
- [Asynchronous] Additional material provided on BrightSpace.

- [Synchronous] Weekly live tutorials offered through Zoom to help you practice course concepts.
- [Asynchronous] Discussion forums on BrightSpace.

All synchronous components will be available in EST, Ottawa time zone.

#### 4. Do I need to attend the synchronous sessions during class time?

You may study the course material on their own time. It is recommended that you attend the synchronous (Zoom) sessions, but attendance is not mandatory.

The synchronous (Zoom) sessions will be used to clarify concepts, go over examples, and answer questions from students. To encourage interaction and protect student privacy, the synchronous sessions will not be recorded.

We will also rely heavily on the asynchronous discussion forums on BrightSpace to answer frequently asked questions, and to encourage discussion of class topics. You are encouraged to participate in the online discussions.

### Textbook

#### 1. Is there a required textbook for the course?

Class materials will be based on online course notes by M. Lanthier, C. Laurendeau, and D. Nussbaum. These can be accessed online:

<https://www.scs.carleton.ca/~clarend/Courses/COMP2401/Notes>

### Evaluation of learning

#### 1. How will my learning be assessed?

Learning will be assessed via 5 assignments, weekly tutorials, and a midterm and final exam. All of these assessment components must be completed individually. No collaboration of any kind is allowed on the assignments, tutorials, and exams. The following are the deadlines and the associated weights for each of these components:

Component	Weight	Due date
10 Tutorials	10% (each is worth 1%)	Weekly, beginning on September 16 <sup>th</sup> and ending on December 2 <sup>nd</sup> (no tutorial on Nov 4 <sup>th</sup> ).
Assignment 1	10%	September 28 <sup>th</sup> , 2021 at 11:55pm (EST, Ottawa time)
Assignment 2	10%	October 15 <sup>th</sup> , 2021 at 11:55pm (EST, Ottawa time)
Midterm	15%	November 1 <sup>st</sup> , 2021 during class (6:05 pm-7:25 pm EST, Ottawa time)
Assignment 3	10%	November 5 <sup>th</sup> , 2021 at 11:55pm (EST, Ottawa time)

Assignment 4	10%	November 23 <sup>th</sup> , 2021 at 11:55pm (EST, Ottawa time)
Assignment 5	10%	December 10 <sup>th</sup> , 2021 at 11:55pm (EST, Ottawa time)
Final exam	25%	TBA scheduled by the university

## 2. How can I do well in the course?

In addition to attending the lectures, engagement with the material is required outside of class time to do well on the assignments. The target average workload for this course is 9-10 hours per week (including individual study time, asynchronous activities, and synchronous activities).

## 3. Can I submit an assignment past the due date?

You will have a total of 72-hour grace period for late submission of assignments. These hours can be divided in whichever way you want across the 5 assignments. For example, you could: (i) submit one assignment 72 hours late; (ii) submit each of the 5 assignments 14 hours late, or (iii) divide the hours among the assignments however you want.

You do not need to contact us to use the grace period. Assignments handed in late beyond your 72-hour grace period will be penalized by a deduction of 10 marks (out of a possible 100), per 24-hour period, or part thereof (e.g., anything from 1 minute to 24 hours past the deadline still counts as one period).

## 4. What happens if I am unable to attend the synchronous midterm due to circumstances beyond my control?

If you are unable to attend the midterm, the weight of the midterm will be moved to the final exam, making the final exam worth 40% of your total grade. There will be no make-up midterm. For this accommodation to take place, you must provide the instructor proper documentation prior to or shortly after missing the midterm

## Software

### 1. Which software do I need for this course?

You will be programming in the Linux environment using a VirtualBox virtual machine. Please refer to the SCS website to access instructions on how to set it up: <https://carleton.ca/scs/technical-support/virtual-machines>

Once you install the VirtualBox, you need to install the Virtual Machine. The Virtual Machine that we will use is named COMP2401-F21.ova. You need to download that file and then when you run the VirtualBox, you can select Add... from the Machine menu to add the virtual machine. Once added, you simply click on the virtual machine that you added (on the left side of the window) and then

press the Start button. The username and password is always **student**.

## Academic integrity

### 1. Can I collaborate with someone on an assignment, tutorial, or examination?

Collaborating on assignments, tutorials, and examinations is strictly prohibited. Doing so would constitute a violation of [Carleton University's Student Academic Integrity policy](#). All violations of this policy (i.e., plagiarism) will be pursued through official university channels. It is your responsibility to familiarize yourself with the [Student Academic Integrity policy](#). If you are unsure of the expectations regarding academic integrity (e.g., how to use and cite references, how much discussion of your work with others is appropriate), **ASK** your instructor beforehand.

### 2. Can I post an assignment, tutorial, or exam question(s) online?

Sharing assignments, tutorials, or exams online (e.g., to sites like Chegg, CourseHero, OneClass, etc.) is considered academic misconduct. In addition to this, you are never permitted to post, share, or upload course materials without explicit permission from your instructor. Academic integrity offences are reported to the office of the Dean of Science.

### 3. What are the penalties for an academic integrity violation?

Academic integrity offences are reported to the office of the Dean of Science. Penalties for such offences can be found on the ODS webpage: <https://science.carleton.ca/academic-integrity/>. Typically penalties include the following:

- First offence, first-year students (< 4.0 credits completed): No credit for assessment(s) in question, or a final grade reduction of one full letter grade (e.g., A- becomes B-), whichever is a greater reduction
- First offence (anyone else): A grade of F in the course
- Second offence (anyone): A grade of F in the course and a one-term suspension from studies
- Third offence: Expulsion from the University

Note: While these are the standard penalties, more severe penalties may be applied when warranted.

### 4. What are the university policies regarding academic integrity?

**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. Examples of punishable offences include: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found here:

<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. Standard penalty guidelines can be found here: <https://science.carleton.ca/academic-integrity/>

**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.

## Intellectual property

### 1. Can I share the class material with individuals outside of the course (e.g., CourseHero, OneClass)?

No. All lecture and course materials (including all PowerPoint presentations, course notes, handouts, and similar materials) are protected by copyright. The instructor is the exclusive owner of copyright and intellectual property of all course materials. You may take notes and make copies of course materials for your own educational use. You may not allow others to reproduce or distribute lecture notes and course materials publicly for commercial purposes without the instructor's express written consent.

## Student support services

### Mental health and well-being

Carleton University offers programs and services that promote positive mental health and assist students with realizing their full potential. These student support services and resources are explained here: <https://carleton.ca/studentssupport/supporting-our-students>

### Undergraduate Academic Advisor

The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP; or by email at [scs.ug.advisor@cunet.carleton.ca](mailto: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

SCS students can access one of the designated labs for your course. The lab schedule 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/technical-support/>. Technical support is available in room HP5161 Monday to Friday from 9:00 until 17:00 or by emailing [SCS.Tech.Support@cunet.carleton.ca](mailto:SCS.Tech.Support@cunet.carleton.ca).

## Accommodations

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

**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 [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/>.

**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 the [Paul Menton Centre website](#).

**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, 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. For more details, see the policy.

## Health and safety

### COVID-19

All members of the Carleton community are required to follow COVID-19 prevention measures and all mandatory public health requirements (e.g. wearing a mask, physical distancing, hand hygiene, respiratory and cough **etiquette**) and [mandatory self-screening](#) prior to coming to campus daily.

If you feel ill or exhibit COVID-19 symptoms while on campus or in class, please leave campus immediately, self-isolate, and complete the mandatory [symptom reporting tool](#). For purposes of contact tracing, attendance will be taken in all classes and labs. Participants can check in using posted QR codes through the cuScreen platform where provided. Students who do not have a smartphone will be required to complete a paper process as indicated on the [COVID-19 website](#).

All members of the Carleton community are required to follow guidelines regarding safe movement and seating on campus (e.g. directional arrows, designated entrances and exits, designated seats that maintain physical distancing). In order to avoid congestion, allow all previous occupants to fully vacate a classroom before entering. No food or drinks are permitted in any classrooms or labs.

For the most recent information about Carleton's COVID-19 response and required measures, please see the [University's COVID-19 webpage](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact [covidinfo@carleton.ca](mailto:covidinfo@carleton.ca)

Please note that failure to comply with University policies and mandatory public health requirements, and endangering the safety of others are considered misconduct under the [Student Rights and Responsibilities Policy](#). Failure to comply with Carleton's COVID-19 procedures may lead to supplementary action involving Campus Safety and/or Student Affairs.