
Instructor:	Connor Hillen (He/Him)	Lecture Hours:	Section B: Mon. Wed. 16:05 - 17:25 Section D: Mon. Wed. 08:35 - 09:55
Email:	connorhillen@cunet.carleton.ca	Website:	https://brightspace.carleton.ca
Office Hours:	Available on Brightspace	Location:	Refer to Class Schedule

Carleton University acknowledges the location of its campus on the traditional, unceded territories of the Algonquin nation.

1. About the Course

Calendar Description: Introduction 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 synchronisation, inter-process communication, file systems, networking, pointers, heap and stack memory management, and system/library calls.

Prerequisite(s): (COMP 1006 or COMP 1406 or SYSC 2004) with a minimum grade of C-.

Textbooks and Other Resources: In lieu of a textbook, course notes have been made available online.

- M. Lanthier, C. Laurendeau, and D. Nussbaum, *COMP2401 Course Notes*. [Online]
<https://people.scs.carleton.ca/~claurend/Courses/COMP2401/Notes/>

Objectives: This course is here to introduce you to the C programming language and the introductory concepts of systems programming which underlie your computer programming and computer use. The objective is to introduce you to the principles behind systems programming, gain some proficiency working in the C programming language and building C programs, and be comfortable writing and designing programs which work at a lower level and necessitate working with memory directly.

Topics Covered: While minor areas may be adjusted for time, students who complete all material, attend all lectures, and perform all readings should be able to:

- Implement basic coding practices in the C language (eg. loops, conditions)
- Selecting appropriate data types to solve problems in C
- Design and implement static and dynamic data structures in C, such as linked lists
- Execute builds of C programs using command line and makefiles
- Organise program structure to follow clean coding practices in C
- Perform file input/output tasks
- Implement concurrent programming techniques, including process management and threads
- Utilise (or at least understand the capabilities of) graphics libraries and shell scripts

Technology: All students are required to work using the course virtual machine (VM). Information about the virtual machine will be posted to Brightspace.

Learn more about VMs here: <https://carleton.ca/scs/tech-support/virtual-machines/>

2. Assessments

Grading: There will be **weekly tutorials** (beginning the week of Sept. 4th (Section B) and Sept. 11 (Section D)), **four (4) assignments approximately biweekly** starting on the week of September 12th, **4 Knowledge Check quizzes**, an online **midterm exam**, and a **final project**. There will be **no extra credit assignments**. A schedule is available on the Tentative Course Calendar on the course website. Your final grades will be calculated as following:

Tutorials (Best 8 of 10 x 2%)	16%
Assignments (4 x 10%)	40%
Assignment Knowledge Check Quizzes (Online, Best 4 of 5 x 1%) ..	4%
Midterm Exam (Online Asynchronous, Nov. 2nd)	10%
Individual Project (Due Dec. 7th)	30%

Assignments: Completing assignments is **mandatory**. You will be uploading your submissions to Brightspace. You are expected to work on your assignments **consistently** upon release, and upload your progress to the submission periodically (ideally, at least **once every 48 hours**). As you are expected to submit periodically and consistently, technical issues near the submission deadline will not be considered for exemptions. **If you are experiencing extenuating circumstances** requiring additional accommodations (for example: ongoing medical issues), you may **petition the Associate Dean's office**.

Tutorials: Completing the tutorial material is **mandatory**; however, **attendance** to the tutorial session itself is **recommended to receive TA assistance, but is not required**. If you are attending the tutorial, you should be attending the tutorial **in the section in which you are registered**, unless you have made special arrangements with the instructor. Additional information about completing and submitting tutorials is available on Brightspace.

Knowledge Check Quizzes: Knowledge Check Quiz participation is **mandatory**. These are short online quizzes used to help you gauge how well you know the material needed for the active assignment. They are released alongside the assignments, and are due **Wednesdays at 11:59PM**, one week after they are assigned.

Midterm Exam: Midterm participation is **mandatory**. The exam will be held online using Brightspace and can be completed any time within the 48-hour period. Dates are subject to change, with a minimum of two weeks notice. During the days that the exam is running, no lectures will be held; you may use the scheduled lecture time, but due to the asynchronous nature, no additional support will be offered during this period.

Midterm, Quiz, Tutorial, Assignment Accommodations:

If you are ill during the period of the midterm, you may be granted an exemption only if you submit a copy of Carleton's official **Self-Declaration Form** (in lieu of a medical certificate) available online here: <https://carleton.ca/registrar/cu-files/covid-19-self-declaration-form/>

You may receive at most **one** extension or exemption for an assignment, knowledge check quiz, or tutorial - if you are able to show that you were unable to work during the time that the assignment was released (via a COVID-19 Self-Declaration Form). You **are expected** to work early and often, so forms must be submitted at least 48 hours before the relevant submission deadlines.

3. Important COMP 2401 Course Policies

Plagiarism Policy: A separate **plagiarism policy document** which describes what might be considered an academic offence in this course can be found on the course website. Students **must read this document thoroughly** and must agree to adhere to this policy and all policies stated in this course outline **before course resources will be made available**.

For information about up-to-date penalties regarding academic integrity violations, refer to the following resource: <https://science.carleton.ca/academic-integrity/>

For a first offence, first year students will receive no credit for the assessment in question, or a final grade reduction of one full letter grade (eg. an A- becomes a B-), whichever is a greater reduction. **For a first offence for any other student, students will receive a grade of F in the course.** A second offence will normally include a one-term suspension. Refer to the resource above for additional information regarding standard penalty guidelines.

Communication Policy: In order to reduce the volume of emails and expedite responses, the only emails that should be sent to the instructor, teaching assistants, or lab coordinators should **require confidentiality** or is personal in nature, and be handled via direct email from a Carleton email address.

Students are expected to **check their Carleton email addresses daily for announcements.** Reminders for upcoming assignment deadlines will be handled using the default Brightspace notifications system, so if you require reminders, check that your Brightspace settings will send notifications.

Students should only **expect responses within 3 business days** during **business hours (8:30AM - 5:30PM, Monday - Friday)**. Plan ahead - questions asked over the weekends may go unanswered until the following week.

To make sure communication is handled in a timely manner, follow these guidelines:

1. Any **email communication** must include **[COMP 2401B]** or **[COMP 2401D]** in the subject line and include all relevant information for your inquiry
2. **Assignment questions** should *first* be dealt with by discussing with a TA during office hours or via the Brightspace forums
3. **Course material assistance** can be handled via Brightspace forums or, if time allows, during either instructor or TA office hours.
4. **For technical issues**, first look on the Brightspace forums or the course resources, then check the [SCS technical support page](#), then inquire with teaching assistants who may forward your concern to the instructor.
5. **Students must behave in a professional manner in all communications.** Any communication that is seen as abusive, discourteous, or unprofessional may be moderated, ignored, or reported to the university for disciplinary action.

Grade Disputes: It is **your responsibility** to ensure that quiz, tutorial, and assignment marks posted to Brightspace are accurate and correct **within one week** of the date the marks were released. Concerns must first be communicated to the teaching assistant that graded the assessment, then if the result is unsatisfactory, can be forwarded to the instructor. After one week, **no further consideration will be offered and marks will not be changed.**

4. Important Considerations

1. **Verifying the correctness of assignment submissions is your responsibility.**
 - a. You are expected to **submit regularly** as you work on the assignment.
 - b. You are expected to **download and test your submission on the course virtual machines** to make sure it is both complete and correct. If your submission is missing files, or if your code can not be run, or if your code can not be opened and read for marking purposes, you may receive a grade of zero.
 - c. You are expected to **verify all submission requirements** (eg. file types, file names) are met. If files are named incorrectly or packaged incorrectly, you may be penalised up to receiving a zero.
 - d. You are expected to submit long before the final deadline; any submissions submitted even one minute following the cut-off (Wednesdays at 11:59PM EST) will receive a zero.
2. **You can expect to spend at least eight (8) hours per week on this course, in addition to lecture time.**
3. **You are required to have a laptop.** Every student that has been enrolled in a 1000-level course or above offered by the School of Computer Science after the 2020/2021 school year is **required to have a laptop**. For information is available here: <https://carleton.ca/scs/scs-laptop-requirement/>
4. **Questions should be posed on official course discussion boards.** As per the communication policy, all email communication should be kept to a minimum and utilised only if the nature is private or personal.
5. **All materials created for this course 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 **strictly prohibited**.

5. Course Modality

This course is taking a **hybrid approach** to learning, but note that this approach is experimental and may be subject to change during the term. Some lectures will be presented in-person to promote discussion, and some lectures will be held online to promote coding alongside the lecture. Which lectures will be held online and which lectures will be held in-person will be available and updated in the tentative course calendar posted to the course website.

In-person lectures *may* be streamed and recorded via Zoom, with links available on the course website. There is always the risk of technical issues occurring with these lectures, and students should make an effort to attend in-person if they are comfortable and capable.

Please note that by participating in these lectures, online or in-person, you may be included in these recordings. When attending on Zoom, Zoom will always notify meeting participants that a meeting is being recorded. It is not possible to disable this notification.

*These recordings will only be available to the members of this class, and **I ask that everyone be respectful and not allow others to view the recordings.** At the end of the course, the recordings will be deleted.*

Please note that recordings are protected by copyright. The recordings are for your educational use, and you are not permitted to publish to third party sites or share. **If you have concerns about being recorded**, please email the instructor directly so we can discuss these.

6. School of Computer Science Information

Undergraduate 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. 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.

7. University Policies

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 [Equity Services](#).

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. 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

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](#).

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 unauthorised co-operation or collaboration. Information on this policy may be found [here](#).

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](#).

Unauthorised 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.

...And I hope you enjoy the course and have a great term!