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## **Course Information:**

Instructor: Yanan Mao (She/Her/Hers)  
Lecture Hours: Mondays & Wednesdays 2:35 pm - 3:55 pm  
Location: Online Via Zoom (ID: 974 8101 2850)  
Email: [yananmao@cunet.carleton.ca](mailto:yananmao@cunet.carleton.ca)  
Office Hours: Thursday & Friday 2:00 pm - 3:30 pm  
Location: Online Via Zoom (ID: 964 2051 7439)

Lab/Course Coordinator: Vojislav Radonjic  
Email: [Vojislavradonjic@cunet.carleton.ca](mailto:Vojislavradonjic@cunet.carleton.ca)

## **Teaching Assistants:**

Ishan Bhalla([IshanBhalla@cmail.carleton.ca](mailto:IshanBhalla@cmail.carleton.ca) )  
Joshua Marshall ([JOSHUAMARSHALL3@cmail.carleton.ca](mailto:JOSHUAMARSHALL3@cmail.carleton.ca) )  
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Omar Anwar ([OmarAnwar@cmail.carleton.ca](mailto:OmarAnwar@cmail.carleton.ca) )  
Tuan Khang Tran([TuanKhangTran@cmail.carleton.ca](mailto:TuanKhangTran@cmail.carleton.ca) )  
Office Hours: TBA

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## **Course Description:**

Introduction to system-level programming with fundamental OS concepts, procedures, primitive data types, and 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

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

**Postrequisite(s):** Earn a C- or better is a must to take some required 2<sup>nd</sup>/ 3<sup>rd</sup> year courses.

## **Course Objectives:**

- To expose students to system-level programming via the **C language**
- To gain experience working with a procedural language
- To gain experience working at low-level implementation of **data structures**
- To gain insight into **memory management** – Pointers and Memory Addresses
- Gain insight into processes and execution of programs
- To gain insight into how **programs are structured**
- To gain experience with **Linux/Unix** and basic tools

## **Course Environment:**

**Lectures and Tutorials** will be held via **Zoom** (required Carleton Login).

**Communication** will be primarily handled via **Discord** and/or **emails**.

**Assignments** are required to work using the course **virtual machine (VM)**. Information about the virtual machine will be posted to Brightspace. Make sure to use the latest VM for COMP2401. To learn information about VMs, please check the link:

<https://carleton.ca/scs/tech-support/virtual-machines/>

A **laptop** is required for every student who 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. For more information, please visit <https://carleton.ca/scs/scs-laptop-requirement/> and then review the requirements at <https://carleton.ca/scs/scslaptop-requirement/laptop-specs/>.

## **Course Notes:**

There is no textbook assigned to this course. Instead, an in-depth set of course notes is accessible. M. Lanthier, C. Laurendeau, and D. Nussbaum, COMP2401 Course Notes.

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

Note that **all materials** generated for this course, encompassing course notes, coding examples, lecture recordings, tutorials, tutorial code, assignments, assignment code bases, marking schemes, tests, exams, and test solutions, are the intellectual property of the instructor. These resources are designed exclusively for the personal and non-transferable use of registered students. **Any reproduction, reposting, or redistribution of course materials, whether in part or in whole, without the explicit written consent of the instructor, constitutes a copyright violation and is strictly prohibited.**

**You are not allowed** to 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.

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## **Course Evaluation**

Component	Weight	Details	Due Date
Tutorials	10%	1% each	Weekly, Fri 11:59 pm
Assignments	50%	10% each	Biweekly, Fri 11:59 pm
Midterm	15%	During the class time	To Be Announced
Final Exam	25%		To Be Announced

## **Assignments:**

Assignments will be announced and available on Brightspace. Assignments are to be submitted electronically before the due date on Brightspace. Make sure that you submit your assignment ahead of the deadline in case there is a problem with Brightspace. You have multiple chances to resubmit the work, and the latest one will be the one for marks. Once you submit an assigned download it to a new directory and test the code. This will ensure that you upload the correct solution to the assignment.

You can submit an assignment up to one day late. In this case, the grade will be reduced by 20% of the assignment maximum grade (e.g., if the assignment maximum grade is 100 then the grade will be reduced by 20 points). Assignments submitted later than 24 hours after the due date and time will receive a grade of 0.

## **Tutorials:**

The tutorials provide you with time to gain experience with the material learned in class (ask questions if you do not understand the material). You are required to attend the tutorial session and stay for at least one hour to complete the tasks. Attendance and submission all matter to the marks for tutorials.

## **Marking Issues:**

All the marks will be posted on BrightSpace. The Student should ensure that the posted marks are correct. Any complaints regarding marks should be brought to the attention of the TA who marked it. Only if the TA does not address the problem to your satisfaction should you bring the matter to the instructor. This should be done no later than one week after the assignment has been graded. After this time, no remarking will be done.

## **University Policies:**

**Collaboration: Assignments and tutorials 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, **cheating 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 dishonestly.

**Plagiarism: All cases of plagiarism or cheating** will be pursued through official university channels. Academic integrity offenses are reported to the office of the Dean of Science. Penalties for such offenses can be found on the academic integrity webpage. If you are unsure of the expectations regarding academic integrity, please ask your TAs or instructor. For more details, please visit: <https://science.carleton.ca/students/academic-integrity/>

**Academic Calendar:** Carleton's academic year, including registration and withdrawal dates, see Carleton's Academic Calendar at: <https://calendar.carleton.ca/academicyear/>

**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: <https://carleton.ca/pmc>

**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:

<https://carleton.ca/womensstudies/resources-and-links/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/>

**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, please visit:

<https://carleton.ca/sexual-violence-support>

**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 that range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. For more information, please visit:

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

**University Policies 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 at:

<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>