CIS*2500 Intermediate Programming

Winter 2023

UNIVERSITY of GUELPH

School of Computer Science

1 INSTRUCTIONAL SUPPORT

Section 01: MWF – 3:30pm – 4:20pm ROZH 103
Section 02: MWF – 1:30pm – 2:20pm ROZH 103

Instructor: Ritu Chaturvedi
Office: Reynolds 2211
Email: cis2500@socs.uoguelph.ca
Office hours: **Tues, Wed 10:30am – 12noon**

Teaching Assistants: To be posted on the course website
Email: cis2500@socs.uoguelph.ca
Office Hours: to be posted on the course website

2 LEARNING RESOURCES

2.1 SoCS Linux Environment

2.1.1 SoCS NoMachine Graphical Linux Environment: nomachine.socs.uoguelph.ca is a Graphical Linux environment, available remotely for SoCS students. When logged in you will have access to the same servers as linux.socs.uoguelph.ca but with a graphical desktop interface. Details on download and installation of nomachine can be found at https://wiki.socs.uoguelph.ca/techsupport/guides/nomachine.

2.1.2 SoCS SSH Access: SSH Allows you to remotely connect to SoCS Linux servers. To connect from a Linux or Mac OS/X base computer, use the command "ssh <username>@<hostname>.socs.uoguelph.ca", where <username> is your SoCS username and <hostname> is the name of the server you wish to connect to (i.e. linux, portkey). To connect from Windows use BitVise SSH or puTTY. More information on this will be available on your course webpage.

2.2 Course Website: courselink.uoguelph.ca

2.3 Textbook (Recommended)

C Programming, A Modern Approach (2nd edition) By K.N.King. Publisher - Norton and company.

2.4 Course Calendar Description:

In this course students learn to interpret a program specification and implement it as reliable code, as they gain experience with pointers, complex data types, important algorithms, intermediate tools and techniques in problem solving, programming, and program testing.

The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs:
http://www.uoguelph.ca/registrar/calendars/index.cfm?index

2.6 Course Topics:

- Working with memory
- Dynamic memory allocation
- Arrays, strings
- Files
- Data structures and Algorithms
- Function Pointers
- Linux tools
- Software design & testing

2.5 Important Dates:

- *Monday January 9th* : First day of class
- *Monday*, *February 20th – Friday, February 24th* : Winter break - NO CLASSES SCHEDULED
- *Friday, April 8th:* Holiday - NO CLASSES SCHEDULED -- classes rescheduled to Mon, April 10th
- *Friday*, *April 10th:* Classes conclude
- *Thursday, April 13th*: Exams start

---

3 ASSESSMENT

3.1 Dates and Distribution

Practical (50%):

- **Learning activities (Weekly Worksheets): 9%**
  - Due every Friday 11:59pm (1% per submission to a max of 9% - drop lowest grade)
- **Programing Labs: 16%**
  - **4 labs * 4% each**
  - Due: in lab
- **Assignments: 25%**

  A1 (7%): Due Friday February 3rd, 11:59pm
  A2 (9%): Due Friday March 3rd, 11:59pm
  A3 (9%): Due Friday March 31st 11:59pm

Exams (50%):

- **Lab Exam: 10%**
- **Quizzes: 15%**
  - 5 quizzes * 3% each
  - Due Sunday 11:59pm of the week

- **Final Exam: 25%**

3.2 Requirement to pass the course

To pass the course you need to:

• Achieve an overall grade of 50% or above

• Pass the Exams component (50% or above on the weighted average of the lab exam, quiz and final exam)

- You may fail any of the quizzes or final exam as long as your weighted average of all quizzes, lab exam and final exam remains above 50%.

If you do not pass the Exams component:

- Your final grade will be equal to the weighted sum of the lab exam, quizzes and final exam.

3.3 Course Grading Policies

Missed Labs: If you miss a lab due to **documented** grounds for granting academic or religious accommodation, the weight of the missed assessment will be added to the final exam. There will be no makeup labs and you may not attend a lab section other than the one in which you are registered (unless otherwise permitted).

Missed Lab Exam: If you miss the lab exam due to **documented** grounds for granting academic or religious accommodation, you will be allowed to write makeup lab exam on the following date.

Makeup lab exam: will be held in Week 12 regular lab time – exact date to be announced later

If you miss the lab exam and the makeup lab exam, then you will need to apply for a deferred lab exam to be written in Summer 2023 semester.

Late Assignments: All students will benefit from a 48-hour grace period after the original due date of the assignments. In all but exceptional circumstances, this should allow enough flexibility to accommodate for any unforeseen events that could otherwise impact your work. In fairness to the students who submit their work on time, a deduction of 10% will be applied on the first minute that the assignment is handed in after the grace period. An additional 20% deduction will be applied for the next 24 hours thereafter.

Assignment Regrades: Regrading can be done in 2 steps:

Step 1: Requests for regrades of assignments 1 and 2 must be emailed to cis2500@socs.uoguelph.ca within 5 business days of receiving your mark. The request must have the word **regrade** and the name of the assignment or exam in the subject line and must contain a detailed description of why you feel the assignment should be regraded.

Step 2: You will then book an appointment for your assignment to be regraded in person or on Teams. It is important to note that your assignment/exam will not be regraded unless you meet a TA on Teams.

Note: There is no regrade option for Assignment 3.

Note: It is important to note that a regrade is not a chance to redo the assignment. The original submission will be graded.

Missed Assessments: If you are unable to meet an in-course requirement due to medical, psychological, or compassionate reasons, please make an appointment to meet your course instructor. Please see below for specific details and consult the undergraduate calendar for information on regulations and procedures for Academic Consideration:
http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Accommodation of Religious Obligations: If you are unable to meet an in-course requirement due to religious obligations, please email the course email address **within two weeks of the start of the semester** to make alternate arrangements. See the undergraduate calendar for information on regulations and procedures for Academic Accommodation of Religious Obligations:
http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomrelig.shtml

4 TEACHING AND LEARNING ACTIVITIES

You are responsible for learning the material for this course. Computer programming can only be learned through practice. The lab component of this course will be entirely devoted to helping you learn to create algorithms and solutions to computing problems. The textbook exercises and the optional coding clinics are designed to help you understand the mechanics of the C language. Lectures will provide an overview of the topics, examine common applications, and introduce design techniques.

Note that lectures will be delivered in a **blended** format this semester. We will meet in-person on Mondays and Fridays, whereas a pre-recorded video will be posted on Courselink for Wednesday's class. You are expected to go over the posted video and learn the material before Friday's in-person class.

Below you can find the tentative schedule for lectures and labs. Changes to this schedule will be announced on the course website.

4.1 Tentative Schedule

Monday	Week	Topics	Worksheets	Labs	Quizzes	Assignments	Lab Exam & Final Exam
09-Jan	Week 1	Intro, Compilation	W1 (Ungraded)				
16-Jan	Week 2	Review of Structs, Files, Arrays, Functions	W2	L1			
23-Jan	Week 3	Binary files	W3		Q1		
30-Jan	Week 4	Memory Part I	W4			A1	
06-Feb	Week 5	Memory Part II	W5	L2	Q2		
13-Feb	Week 6	Recursion	W6				
20-Feb	Week 7	STUDY BREAK	NO CLASSES OR LABS THIS WEEK				
27-Feb	Week 8	Dynamic Data structures - Linked Lists	W8			A2	
06-Mar	Week 9	Other data structures - stacks, queues	W9	L3	Q3		
13-Mar	Week 10	Function pointers	W10	L4			
20-Mar	Week 11	Algorithms - searching, sorting	W11		Q4		Lab Exam
27-Mar	Week 12	Algorithms - searching, sorting	W12			A3	Makeup Lab Exam
03-Apr	Week 13	Linux programaming (chmod, folk, pipe) No CLASS on April 7th			Q5		
10-Apr	Week 14	Review Last day of class: April 10th (Monday)					
19-Apr	FINAL EXAM	Wednesday 7:00 - 9:00pm					Final Exam (Room: TBA)

5 ROLES AND RESPONSIBILITIES

5.1 Communication & Email Policy

Please use lectures, lab sessions, and the discussion forum as your main opportunities to ask questions about

the course. Questions that are specific to your particular situation may be emailed to cis2500@socs.uoguelph.ca and will be answered by one of the instructional team. Extremely private communication should be conducted in person by making an appointment with the course instructor.

Major announcements will be posted to the course website and/or the discussion forums. **It is your responsibility to check the course website regularly.** As per university regulations, all students are required to check their <uoguelph.ca> e- mail account regularly: e-mail is the official route of communication between the University and its students.

5.2 Recording of materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, classmate or guest lecturer. Material recorded with permission is restricted to use for that course and may not be posted on any public space unless further permission is granted.

5.3 Copies of out-of-class assignments

Students must keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

5.4 Instructor's Role and Responsibility to Students

The instructor's role is to develop and deliver course material in ways that facilitate learning for a variety of students. Selected notes will be made available to students on the course website but are not intended to be stand-alone. During lectures, the instructor will expand and explain the content of notes and provide example problems that supplement posted notes. Scheduled classes will be the principal venue to provide information and feedback for exams and assignments.

5.5 Students' Learning Responsibilities

Students are expected to take advantage of the learning opportunities provided during lectures, labs and help sessions. Students, especially those having difficulty with the course content, should also make use of other resources recommended by the instructor. Students who fall behind due to illness, work, or extra-curricular activities are advised to keep the instructor informed as early as possible. This will allow the instructor to recommend extra resources in a timely manner and/or provide consideration if appropriate.

5.6 Drop Date

Courses that are one semester long must be dropped by the end of the last day of classes; two-semester courses must be dropped by the last day of classes in the second semester. The regulations and procedures for Dropping Courses are available in the Undergraduate Calendar.

---

6 ACADEMIC INTEGRITY

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. All students who take a SOCS course must pass the **Academic Integrity Self Test**.

For educational purposes, instructors impose conditions on assignments that may limit students' permission to

collaborate with others or to utilize external sources (including, but not limited to, software, data, images, text, etc.). Any permitted utilization must be done with proper references. Aiding and abetting is a punishable offence; students must be careful not to help others commit offences by giving out solutions or providing to access computer accounts. Instructors may use automated tools to detect possible cases of academic misconduct.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:
http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml

The SOCS Academic Integrity Unit:
http://moodle.socs.uoguelph.ca/course/view.php?id=2 Login with your central login credentials.

7 ACCESSIBILITY

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability, or for a short-term disability should contact Student Accessibility Services (SAS) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website:
http://www.uoguelph.ca/csd/

Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (https://news.uoguelph.ca/2019-novel-coronavirus-information/) and circulated by email.

For information on current safety protocols, follow these links: https://news.uoguelph.ca/return-to-campuses/how-u-of-g-is-preparing-for-your-safe-return/

https://news.uoguelph.ca/return-to-campuses/spaces/#ClassroomSpaces

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.