

Carleton University School of Computer Science
COMP 2401B -- Introduction to Systems Programming

Class Schedule

Classroom: AT 302

Class Times: Tuesday and Thursday 13:00-14:30

Tutorials: HP4155

- Session B1 – Thursday 16:00 – 17:30
- Session B2 – Friday 16:00 – 17:30
- Session B3 – Friday 11:30 – 13:00

Course Website: on CULearn

Teaching Assistants:

TA	Email	Office hours

Course 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 synchronization, inter-process communication, file systems, networking, pointers, heap and stack memory management, and system/library calls.

Course Topics

The following topics will be covered in this course:

- Introduction to Computing – Overview of computer organization, basics of programming
- Data Representation - primitive data types, compound data types, Pointers
- Memory Management - stack and heap, dynamic memory allocation, linked lists
- Program Building – compiling, linking, make program, debugger
- Concurrent Computing - concurrent systems, processes (signals, sockets), threads
- File I/O
- Program Structure – i/o, procedural program design, program organization

Prerequisites

COMP 1406 or COMP 1006, with a minimum grade of C

Course Objectives

- Programming using the C language
- Low level manipulation
- Procedural Programming
- Basic system programming (using system operations)
- Using Unix/Linux

Textbook (s)

- Adam Hoover, System Programming with C and Unix, Addison-Wesley, 2010.

Evaluation

Students will be evaluated in this course according to the following measures.

Component	Weight	Due Date
Assignments	20%	cuLearn
Tutorials	10%	weekly
In class Test* (1 or 2 tests)	30%	TBA
Quizzes*	1% per quiz	TBA
Final Exam*	40%	TBA
Incentive Workshops	2%	
Class participation	5%	

* see Evaluation Notes regarding final weight

Evaluation Notes

Assignments

There will be 4-5 assignments in this course. Assignments will be announced in class and will be available on cuLearn. Assignments are to be submitted electronically before the due date on cuLearn. **No Late Assignments.**

You must submit at least 50% of the assignments to meet the course requirements

Tutorials

There will be 10-11 tutorials. The tutorials provide you with a time to gain experience with the material learned in class. Use it to gain insight and ask questions if you do not understand the material.

Tutorial rules:

- ❖ You are required attend the tutorial session for which you are registered
- ❖ Although no grades will be given for tutorial attendance, attendance will be taken.
- ❖ You must attend at least 50% of the tutorials to meet the course requirements.

In-class Tests

There will be one or two tests during the semester. In case when only one test will be conducted. The weight of the in-class tests may be reduced with respect to the number of quizzes. It is at the discretion of the instructor to determine whether the quizzes weight will be shared with the weight of the in-class exams or the final exam. Exams will either be graded by the course TAs/instructor or by Scantron.

Students must retain all assignments and midterm results in case of questions regarding correctness of recorded marks. The marks will be posted on-line. The students should ensure that the posted marks are correct. Any complaints regarding assignment marks should be brought to the attention of the T.A. who marked it (only if the T.A. 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 marked. After this time no remarking will be done.

Quizzes

There will be several quizzes during the term. The quizzes will most likely be online quizzes on cuLearn. Quizzes will be completed outside of class time. Quizzes duration

will be 15-60 minutes long. Students will be given a range of time to start the quiz (e.g., 24 hours).

The weight for each quiz is 1% that will be subtracted either from the in-class tests weight or the final exam weight (instructor discretion). For example if there will be only one quiz then the instructor may decide to have quiz weight as 1% and in-class exams weight as 29%.

Final Exam

The time and place as well as the format of the final exam will be announced later in the term. Do not make travel plans until the dates are known as no special arrangements for earlier exam will be made. The final exam for this course will be graded using the Scantron automatic grading system and where applicable by the instructor or course TAs.

The weight of the final exam may be reduced with respect to the number of quizzes. It is at the discretion of the instructor to determine whether the quizzes weight will be shared with the weight of in-class exams or the final exam.

Incentive Workshops

Students can take up to five study workshop from the list that is associated with the course. For each completed workshop the student will receive 0.4% bonus.

Class participation grade

Class participation is encouraged. Class participation points will be given at the discretion of the instructor.

Attendance

Class attendance is very important as students will be responsible for all items discussed in class.

Course notes will be provided. However, the course notes cover only the main topics. In class tests and final exam will include all material that is covered during class time, tutorials, and assignments (including material in the course book). Note that annotated notes during class time will not be posted.

Collaboration Policy

Collaborating on assignments is strictly disallowed. You must complete the work by yourself. If you need help, please see a TA or your instructor. Posting assignment solutions on discussion boards or on the internet before or after the due date and time is also prohibited.

SCS Computer Accounts

Any student taking an SCS course qualifies to have an SCS account. SCS accounts can be created at the following URL: <http://www.scs.carleton.ca/newacct>. SCS students can access one of the designated labs for your course. The labs are operational 7 days a week 24 hours per day, please be advised that the building will be closed overnight, Mon. - Fri. 23:00 - 8:00 and on weekends from 17:00 - 8:00. Technical support is available in room HP5161 Monday to Friday from 9:00 until 17:00. All SCS account related information is accessible at the following URL: <http://www.scs.carleton.ca/nethelp>.

Undergraduate Academic Advisor

The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP, by telephone at 520-2600, ext. 4364 or by email at undergraduate_advisor@scs.carleton.ca. The undergraduate advisor can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisor will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and the Writing Tutorial Services.

University Policies

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.

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.

See university policy regarding Academic Integrity and Plagiarism:

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

<http://carleton.ca/senate/wp-content/uploads/Academic-Integrity-Policy1.pdf>

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.

Academic Accommodations for Students with Disabilities

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and 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 me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable) at <http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines>

Religious Obligation

Write to me 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: <http://www2.carleton.ca/equity/>

Pregnancy Obligation

Write to me 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: <http://www2.carleton.ca/equity/>

Medical Certificate

The following is a link to the official medical certificate accepted by Carleton University for the deferral of final examinations or assignments in undergraduate courses. To access the form, please go to <http://www.carleton.ca/registrar/forms>