



**CISC 220 Section 2: System-Level Programming
(Fall 2016)**

Webpage: <http://courses.caslab.queensu.ca/cisc220b>

OnQ: <https://onq.queensu.ca/d21/home/69709>

GENERAL INFORMATION

Weekly Schedule

Session	Day	From	To	Location
Lecture	Monday	9:30 am	10:20 am	Jeffery 118
Lecture	Wednesday	8:30 am	9:20 am	Jeffery 118
Lecture	Thursday	10:30 am	11:20 am	Jeffery 118

Instructor and Teaching Assistants

	Name	Email Address	Office	Office Hours
Instructor	Shadi Khalifa	khalifa@cs.queensu.ca	Goodwin 633	TBA*
Teaching Assistants	TBA			
	TBA			
	TBA			

**Shadi Khalifa: I try to answer all student e-mail within 24 hours during the term except that I don't always check e-mail on weekends.

CO/PREREQUISITES

- This course is to be taken concurrent with or subsequent to CISC 124.

COURSE PURPOSE

This is an introductory computer course offered in the Fall term by the Queen's University School of Computing. It covers topic like basic concepts of Unix-like systems, shells and scripting and system-level programming in the C language. These topics gives you the foundation of system-level concepts required by subsequent computing courses.

Topics covered in this course are essential for Software developers, System Administrators and Network Administrators.

LEARNING OUTCOMES

After finishing this course, students should be able to:

- Use the bash shell to create files and run programs, including the use of multiple processes, pipes and I/O redirection.
- Write short scripts using the Unix-like shell, including the use of variables, conditionals, loops, arithmetic, pipes and command substitution.
- Use version control and other backup techniques.
- Write small C programs (up to 100 lines) including the use of pointers, strings, structs and file I/O.
- Demonstrate good memory management in C programming, avoiding both dangling pointers and memory leaks.
- Make simple use of multiple processes in C programs, including sending and receiving signals.
- Use “make” or a similar tool to build and maintain programs involving multiple modules and scripts.

PROGRAMMING LANGUAGES:

- **Bash Shell Scripting:** At the beginning of the term, we will be learning about the Linux operating system and how to interact with it using the “bash” shell (a scripting language). We will also be writing some simple bash scripts.
- **C programming language:** Later on, we will also be using the C programming language. No prior knowledge of C is assumed, but we do assume that by that time students are familiar with basic Java syntax from CISC 124, which means we don't have to spend much time on the parts of C that are very similar to Java.

RESOURCES

Textbook: *“The C Programming Language”* by Brian Kernighan and Dennis Ritchie 2nd edition.

- The Campus Bookstore has a few in stock at \$20.99. Their information page on the book is here: <http://www.campusbookstore.com/Textbooks/Course/17121-CISC220-FALL16>
- You can order a Kindle version here: <http://goo.gl/gZPUew>

Lecture Notes: We will be also using the Lecture Notes developed by Prof. David Lamb. Available here: <http://cs.queensu.ca/home/dalamb/teach/LinuxAndC/LinuxAndC.pdf>

COURSE SCHEDULE

Available on the course's [OnQ](#) page.

MARKING SCHEME

10%	Bi-weekly Online Quizzes on OnQ	Six 2% each and only top 5 scores count...
30%	Programming Assignments	Six 5% each and all 6 scores count...
20%	Written Quizzes	Three 10% each and only top 2 scores count...
40%	Final Exam	
2%	Plus possible bonus points	

- More details can be found here <http://courses.caslab.queensu.ca/cisc220b/marking/>.

COURSE POLICIES

- Requests for additional work to boost an unsatisfying grade will be denied.
- No retakes for online and written quizzes.
- Any question having to do with grades is to be directed to the instructor, and NOT to a TA.
- Marks will be reported on OnQ, as they become available.
- I will not answer any quiz related emails 48 hours before a quiz. So study early to be able to ask me if you are facing problems.

INSTITUTIONAL POLICIES

Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate/Report on Principles and Priorities)

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their submitted work conforms to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see Academic Regulation 1), on the Arts and Science website and from the instructor of this course.

Departures from academic integrity **include plagiarism, use of unauthorized materials, facilitation, forgery and falsification**, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, **actions which contravene the regulation on academic integrity** carry sanctions that can **range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university**.

ACCESSIBILITY

Queen's University is committed to ensuring that information, resources, buildings and services are as accessible as possible. While ensuring accessibility and integration of students with disabilities is everyone's responsibility at Queen's, services for students with disabilities are provided by the Queen's Student Accessibility Services (QSAS). For further information, please visit the QSAS Office Web site: <http://www.queensu.ca/studentwellness/accessibility-services>

If for any reason you **can't take online tests [medical reasons]**, please come talk to me or send me an email and we will figure something out.

If you need **special accommodations for your final exam**, you need to discuss that with the Queen's Student Accessibility Services (QSAS) and they will help you to arrange it and the **deadline for that is mid-semester**. If you don't bother to make the arrangements by the deadline you'll have to write in the regular exam hall.

If you have a **sudden last-minute need for accommodations (such as a broken arm)** then talk with the Queen's Student Accessibility Services (QSAS) and if they write me a letter confirming that you need accommodations they can't provide I will help you out.