

Carleton University
Department of Systems and Computer Engineering
SYSC1102 C++ Programming Winter 2008

Course Outline

Professor: Aysegul Cuhadar, Room 7036 MC, cuhadar@sce.carleton.ca

Lectures MW 11:35am-12:55pm Architecture Building 508; Office Hours: MW 1pm-2pm. You can also make appointments via email. Please use your connect or engsoc accounts to do this, and remember to put SYSC 1102 in the Subject line.

Catalog description:

Problem solving and program design, emphasizing the computing abstractions underlying real-time system and operating system development. Procedural and data abstraction in C++. Recursion, pointers, linked lists. Precludes additional credit for [ECOR 1606](#).

Prerequisite: [SYSC 1100](#). Students who have not satisfied the prerequisites for this course must either: a) withdraw from the course, b) submit a prerequisite waiver online at www.sce.carleton.ca/ughelp, or c) will be deregistered from the course after the last day to register for courses in the Winter 2008 term.

Objectives:

- To extend fundamental programming concepts and software engineering concepts.
- To provide fundamental programming concepts in the domain of systems programming
- To introduce a second programming language, in this case C++

References:

Main reference: Introduction to Programming with C++, Y.Daniel Lang, Prentice Hall

Secondary Source: M.A. Weiss, C++ for Java Programmers, Prentice Hall

Labs:

In some lab sessions students will be given an on-line lab test. In some lab sessions students will start work on an assignment that is to be worked on during the following week and submitted prior to the next lab session. And, finally, there may be some sessions that involve both a lab test and an assignment.

We will not be announcing, in advance, which lab sessions the lab tests will be. Students are expected to attend their scheduled lab sessions whether or not a test is expected.

There will be a total of 10 lab sessions. Labs will start on Wednesday January 9th.

Your worst lab test mark and your worst assignment mark will be discarded. Please do not ask for exemptions and/or extensions because of illness and so on. You have, in effect, two “sick weeks” to play with, and it is up to you to use them wisely. Serious long-term illness will be dealt with on an individual basis and might require re-doing the course.

Exercises are to be done **ON YOUR OWN**. Any attempt to communicate with other students during a lab test is an academic offence and will be dealt with accordingly. While discussing an assignment with friends, etc., is normal and acceptable, working in teams is not. Students who submit suspiciously similar assignments can expect unpleasant consequences (see “Plagiarism” below). Note also (see “grading” below) that it is not possible to get through this course on the combination of copied assignments and a few marks on the exams. You must learn the material, and the best way of doing this is to do the exercises by yourself.

Exams: A closed-book **midterm exam** will be held during class time on Monday February 25th. Students who have a valid reason for missing the midterm must present documentation (dated within one day of the exam) within a week of the exam. If the documentation is acceptable and received within the time limit, the weight of the midterm will be transferred to the final exam. Otherwise a student will receive 0 on the midterm exam.

A **final exam** will be scheduled during the university's examination period. The final exam is for evaluation purposes only and will not be returned to the student. It is the policy of the Faculty of Engineering that final examination marks will not be released, and marked final examinations will not be shown to students.

Grading Scheme:

Lab tests – 10 marks
Assignments – 10 marks
Midterm Exam – 20 marks
Final Exam – 60 marks Note that, in order to pass the course, students must pass the final exam (50% or better).

Web Site:

Supplementary lecture notes and assignments will be placed on the SYSC 1102 Web site. The URL for the site is: <http://www.sce.carleton.ca/courses/sysc-1102>. All students must understand that the supplementary lecture notes are provided as an outline of course material only! Studying only these supplementary notes is **not enough** to pass the course. Regular attendance at lectures is expected of all students, and supplemental reading of the text with regular practice at suggested exercises is the best way to prepare for tests and exams. You will be **responsible for all material** presented in the course, not only the material provided in these supplemental notes!

Tentative Course Outline:

- Fundamental C++
- Classes and Objects
- Functions and recursion
- Arrays and vectors
- Pointers and strings
- Classes: a deeper look
- Inheritance
- Polymorphism
- Templates and exception handling
- Data structures

Students with Disabilities:

Students with disabilities who require academic accommodations in this course are encouraged to contact the Paul Menton Centre for Students with Disabilities (500 University Centre) to complete the necessary forms. After registering with the Centre, make an appointment to meet with your instructor in order to discuss your needs at least two weeks before the midterm examination. This will allow for sufficient time to process your request. Please note the deadline for submitting completed forms to the PMC for formally scheduled winter exam accommodations is March 14, 2008.

Plagiarism:

Plagiarism (copying and handing in for credit someone else's work) is a serious instructional offense that will not be tolerated. Please refer to the section on instructional offenses in the Undergraduate Calendar for additional information.