

FORDHAM UNIVERSITY
GRADUATE SCHOOL OF ARTS AND SCIENCES
DEPARTMENT OF COMPUTER AND INFORMATION SCIENCES
SYLLABUS

Semester: Fall, 2018

Course Number: CISC 5300

Course Title: Programming in C++

Faculty: Dr. A. G. Werschulz

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WWW <http://www.dsm.fordham.edu/~agw/programming-c++>

Class meetings: Wednesday: 5:30 p.m.–7:45 p.m., LL602

Office Hours: Wednesday: 4:00 p.m.–5:25 p.m.

Thursday: 4:00 p.m.–5:25 p.m.

(or by appointment)

Text: Bjarne Stroustrup, *Programming: Principles and Practice Using C++*, Second Edition. Addison-Wesley, 2014.

The author has a website at <http://www.stroustrup.com/Programming>.

Please make sure you get the second edition. Although you may be tempted to buy a cheaper “international edition”, please resist the temptation. Sometimes the international editions don’t quite match the U.S. edition.

Class email list: programming-c++@dsm.fordham.edu

Course Outline (Topical):

Programming and "Hello, World!"

Objects, Types, and Values

Computation

Errors

Writing a program

Completing a program

Technicalities: Functions, etc.

Technicalities: Classes, etc.

Input/Output Streams

Customizing I/O

A Display Model

Graphics Classes

Graphics Class Design

Graphing Functions and Data

Graphical User Interfaces

Vectors and Free Store

Vectors and Arrays

Vectors, Templates, and Exceptions

Containers and Iterators

Algorithms and Maps

Protocol:

Examinations: The midterm examination will be on Wednesday, October 10, and will take up roughly one half of the regular class time period. The final exam will be on Wednesday, December 19, taking up the entire class time period.

Homeworks: Programming assignments (as announced in class). I hope to assign one program for each chapter (or two) we cover in class. The earlier programs (being simple) will be due at the next class session; the due dates for the later ones will depend on their complexity.

Attendance: Attendance for this course is mandatory. You will be granted up to two absences from the class. You must inform me by email *in advance* for a non-emergency absence.

Electronica: You may not use laptop computers, tablets, or mobile phones, neither during the lecture nor during the lab.

Grading: Your grade will be determined as follows:

one midterm exam	25%
one final exam	25%
programming assignments	50%

The grading standards for programming assignments are as follows:

Documentation (pseudocode and comments)	20%
Correctness of algorithm	20%
Correctness of program	20%
Overall style of the program	20%
Quality of input/output	20%

Other Requirements: None.

Readings: I hope to cover the first 21 chapters of the text. Some will covered at greater depth than others.

Academic Integrity: To begin with, you should familiarize yourself with the University's policy on Academic Integrity, which may be found at

<http://www.fordham.edu/info/25380/undergraduate-academic-integrity-policy>

Pay special attention to the Standards of Academic Integrity. As a corollary to same, you are not to pass off someone else's solution to any homework exercise (including programming problems) as your own, regardless of whether you obtained it from a fellow student, an acquaintance, or from the Web. Analogously, you should take all reasonable necessary steps to prevent other people from stealing your work; in particular, when you write a program on the Departmental Linux systems at Lincoln Center, it should be located in (an appropriate subdirectory of) your `private` directory.

You will sometimes find yourself stumped by some phase of an assignment. When this happens, you have several options, such as asking a question in class, sending me email, or discussing the problem with me in my office. It would be unrealistic of me to not expect a certain amount of discussion of programming assignments. However, the program you turn in is to be your own work. You are not allowed to share source code with each other (and this includes looking at another student's screen in the lab). If you are in doubt as to the legitimacy of your actions, ask me beforehand. (Programming is *not* a spectator sport!!)

Additional Remarks: This is a course for first-year graduate students in the Department of Computer and Information Sciences, who do not already have a strong background in Computer or Information Science. Its goal is to quickly get you "up to speed", giving you background in computer programming that is roughly equivalent to our undergraduate CS1/CS2 sequence. Hence, the learning curve will be somewhat steep; in one semester, we're trying to cover what Fordham undergraduates see in two semesters. The good news is that you'll be learning a lot quickly.

There will be no make-up exams given after the exam date. If you know in advance that you will have to miss an exam, you must check with me (in advance) to avoid getting a zero for that exam. In case of illness on an exam date, please contact me as soon as possible, so that appropriate arrangements can be made.

As noted above, this course has a website, which you should visit for announcements, assignments, and links to useful resources.

If you believe that you have a disabling condition that may interfere with your ability to participate in the activities, coursework, or assessment of the object of this course, you may be entitled to accommodations. If so, please schedule an appointment to speak with me immediately or you may go to the Office of Disability Services (x6282). Under the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act of 1973, all students, with or without disabilities, are entitled to equal access to the programs and activities of Fordham University.