Semester: Fall Semester, 2013
Course Number: CISC 2000/2010
Course Title: Computer Science II/Computer Science II Lab
Faculty: Dr. A. G. Werschulz
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  Office Hours: Mondays: 10:00 a.m.–11:30 a.m.
  Wednesdays: 3:00 p.m.–4:00 p.m.
  (or by appointment)
Text: Bjarne Stroustrup, Programming: Principles and Practice Using C++, Addison-Wesley, 2009. The author has a website at http://www.stroustrup.com/Programming. If you are thinking about buying a cheaper “international edition” of this text, please read the warning on the class website.

Course Outline (Topical):
  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
  Ideals and History

Additional topics (as time permits):
  Text Manipulation
  Numerics
  Embedded Systems Programming
  Testing
  The C Programming Language

Prerequisites:
  CISC 1600/1610, Computer Science I (and Lab).

Protocol:
  Examinations: There will be one midterm examination, which will be on Wednesday, October 9, during the usual class period. The final exam will be on Monday, December 16, from 9:30 to 11:30.
  Homeworks: Programming assignments (as announced in class). I hope to assign either one program per chapter or one program per pair of chapters, depending on the material being covered. Note that the website has a guide to getting better grades on projects; read it!
Grading:

Programming assignments  50%
Midterm exam               20%
Final exam                20%
Attendance                10%

Please read the attendance policy for this class (attached).

Other Requirements:

None.

Readings:

We hope to cover Chapters 12–22. Time permitting, we will cover additional topics in Chapters 23–27. There may also be additional handouts on material not covered in the text.

Additional Remarks:

CISC 2000/2010 is a second-tier programming course, using the C++ programming language. The prerequisite is CISC 1600/1610 (Computer Science I and Lab). We assume that the students know how to build programs on a Unix system, and that they have had some experience writing C++ programs. This experience should include a familiarity with the basic control structures of C++, the use of functions, and simple class construction. CISC 2000/2010 builds upon this earlier experience. We will use computer graphics as a vehicle for learning about object oriented programming in C++, including inheritance and polymorphism. In addition, we will spend a good amount of time exploring the C++ Standard Template Library.

We will cover a lot of material this semester. This course will involve a great deal of work. The learning curve is admittedly steep, but this means that you’ll be learning a lot quickly.

As likely as not, you will find yourself stumped by some phase of a project or a homework problem. When this happens, you should check with me during office hours (or you should make an appointment if office hours are inconvenient). Although a certain amount of discussion of the programming assignments is to be expected, the final program you turn in is to be your own work. **You are to work alone when actually writing a program!!** If you are in doubt as to the legitimacy of your actions, ask me beforehand. (Programming is *not* a spectator sport!!)

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.

Additional (non-programming) homework problems may be assigned from time to time. While not directly counting towards your grade, it will be to your advantage to do the homework, since we will spend some time in class discussing it; moreover, some of these problems may appear on the exams.

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 (LL207, 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.