Programming with C++
(22C:109:SCB)

Instructor: Greg Nichols
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When and Where: 218 MLH, 6:30 PM - 7:50 PM, Mondays and Wednesdays
Office Location: IDEA Lab, 317 MLH
Office Hours: TBA, or by appointment
Course Website: http://www.cs.uiowa.edu/~gbnichol/fall2006/22c109/

Course Information:

This course is designed for students with some programming experience (in any language). Topics include basic constructs in C++, class specification, inheritance, operator and function name overloading, virtual function and templates, basic concepts of data abstraction in C++ and object oriented programming. This class is not for those who have extensive programming experience in an object oriented language, or for computer science majors who have C++ experience.

Textbook:

C++ How to Program, 5th edition, Dietel & Dietel, ISBN 0131857576

You should use the textbook to follow class discussion (I'll try and let you know where we are in the book at any given time, although we may jump around a bit), and as a resource for clearing up things you don't understand.

Course Website

You should check the course website on a regular basis - it will contain lectures, handouts, assignments, announcements, and grades. I'll do my best to let you know when something new and important has been posted there, but it is your responsibility to check it frequently.

Exams

Exam material will come from the lectures, the book, and the programming assignments. There will be more information about each exam as it approaches.

As of now, here are the midterm and final dates. These *may change*, so as the date approaches, make sure you've got the most recent information!

Midterm: Monday, October 16th, 2006 (in class)

Final: Tuesday, December 12 2006, at 4:30 PM

Grading

Course grades will be based on approximately 6 programming assignments, one midterm exam, and a final exam. Your final grade will be computed as follows:

70% - homework / programming projects
15% - midterm exam
15% - final exam

Grading will be on a plus/minus system and will be calculated on a curve, unless overall scores are very high, in which case a typical fixed scale (90+ is an A of some sort, 80+ is a B of some sort, etc.) will be used. Borderline class grades may be decided with a judgment call on my part, based on class participation, attendance, effort, etc.

The grade for each assignment, exam, etc. will be posted on the class website, using a random code that I will assign to each student upon returning the first assignment.

Assignments

All assignments will consist of short programming projects. FYI, I will be grading these programs by compiling and testing them the CS department's Linux machines. So while it is perfectly OK for you to write your code in whatever programming environment you are most comfortable in, it is **strongly** recommended that you at least test your programs on the lab machines before submitting your work.

One of your goals (during this class and beyond, and in C++ or *any* programming language) should be to write understandable, readable code. You should be making every effort to comment anything that might be confusing to a reader unfamiliar with your program, to name variables intelligently, to use indentation that reflects the code's organization, and so on. All this will be taken into account during grading: poorly organized or written code may have a negative impact on your grade, even if the resulting program works fine.

The goal of this class is to teach you to write functioning programs in C++ - thus, your code *must* compile and run correctly in order for you to receive full credit. **Code that does not compile will receive <u>at most</u> 50% credit, and often substantially less.** Keep this in mind when writing programs: write your code in small pieces, making sure each piece works before moving on to the next one. It is much better to turn in a project that is not finished but has many working pieces than to turn in one that doesn't work at all, even though most of the code is written.

With each assignment, turn in a README text file with any information I need to know regarding this project - any bugs you are aware of, instructions on how to compile your program or make it work, etc. The information in this file will be taken into account during grading, so it will be beneficial for you to make sure that everything I need to know about your work is written in this file.

All assignments will need to be submitted electronically via the department's "submit" command. Each assignment must be submitted by 11:59 PM on the night of the due date. There will be a small grace period, after which assignments will be penalized at the rate of 25% per day (an assignment that is one day late loses 25%, an assignment that is two days

late loses 50%, etc.) If you believe an assignment or exam was graded unfairly, and/or would like to have it re-graded, please let me know about it *within one week* of having the assignment or exam returned to you.

Academic Dishonesty

Academic dishonesty of any kind will not be tolerated. Unless otherwise stated in class, all assignments and exams are to be completed individually. While discussion of ideas and problems with fellow students is encouraged, all homework and projects must be done individually. In certain circumstances, code fragments may be provided to eliminate tedious coding or to provide a common framework for all students. All other code must be original.

Online resources may be used to help you understand the material, but copying online code is grounds for failure, as is "borrowing" code from other students, past or present. Any suspected academic dishonesty will be dealt with on a case-by-case basis, but you should expect that unless the problem can be cleared up to my satisfaction, your work will receive no credit, and further measures may be taken. Any clarification of what does or does not constitute cheating must take place *before* you turn in questionable work.

For clarification on what constitutes academic dishonesty, contact me or consult the printed policy in the Schedule of Courses, the CLAS Bulletin, or online at http://www.clas.uiowa.edu/faculty/teaching/classroom_p&p/acad_fraud_etc.shtml.

Further Considerations

Makeup exams will not be given, except in circumstances allowed under the University of Iowa's policy on absences from examinations (see: http://www.clas.uiowa.edu/faculty/teaching/classroom_p&p/general_exam_p&p.shtml). If a makeup exam is necessary, please inform me as far in advance as possible.

I need to hear from any student with a disability that requires modification to seating, testing, or other class requirements. Please talk with me as soon as possible, so that appropriate arrangements can be made in a timely fashion. For more information on the procedures refer to http://www.clas.uiowa.edu/faculty/teaching/classroom_p&p/disabilities.shtml

Note: As this is a course offered by the College of Liberal Arts and Sciences, course policies are governed by the CLAS.

Complaints

If you have complaints, please feel free to discuss them directly with me during office hours or via e-mail. If you do not feel I have appropriately dealt with your complaint, you should consult the Computer Science DEO/Chair, Professor Jim Cremer, 14D MacLean Hall, (319) 335-1713, cremer@cs.uiowa.edu. If still unresolved, complaints should be directed (for undergrads) to Fred Antczak, the CLAS Associate Dean for Academic Programs, at 335-2633 or (for grads) to Eric Wurster, Graduate College Associate Dean for Academic Affairs, at 335-2137. Further information about this policy is available at: http://www.clas.uiowa.edu/students/academic_handbook/ix.shtml#4