This course is primarily intended to introduce C++. We will cover some C programming as needed at the start of the course. Course topics will include C/C++ syntax, pointers, dynamic memory management, templates, tools related to C/C++ (make, gcc/g++, gdb). Other topics may or may not be included as time permits (primarily motivated by student interest): multiple inheritance, operator overloading, implementation (object layout, etc), or other topics suggested by students.

**Textbooks**

There is no required textbook for this course. If you need a book for reference, last year’s course used *C++ for Java Programmers* by Mark A. Weiss, however, you are likely to find plenty of information by Googling whatever you might want to look up.

**Grading**

Your final grade will be computed from the following:

30% Homeworks

40% Project

20% Exam

10% Class attendance/participation ¹

All homework assignments will be weighted equally, and are intended to help you learn the concepts presented in class. There will be one large project due at the end of the semester. I will give an exam towards the end of the semester, but it will not be a final (you all will surely have enough exams then).

**Project**

The course project is intended not only to tie together many concepts into one program, but also to give you some freedom to explore aspects of C++ that are fun and exciting to you. For your project you may work in a group of up to 3 people — working alone is strongly discouraged, but permissible — pairs are probably best. Exactly what you do for your project is up to you and your group, under the following constraints:

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¹I reserve the right to give in-class quizzes as part of this grade should I feel that it is needed
- The project must be written in C++.
- The magnitude of the project should be appropriate to the group size.
- The project may not any program used to fulfil the requirements of another class (either in a previous semester or the current semester).

At some point prior to Spring Break, each group must submit a proposal naming the members of the group and explaining what their project will be.

**Homeworks**

The primary intent of the homework assignments is for you to learn the material. As such, you may work in pairs on the assignments if you feel that doing so helps you learn. **HOWEVER,** the collaboration must be done in such a way that both people learn. This means that you may NOT simply have a friend do all the work and turn in his/her code. You may pair program (and turn in one submission with both your names on it), or have your own code and simply ask your partner for help when you are stuck. In either case, you must detail who you worked with and how in a comment at the top of your submission. Note that while you may only have one partner per assignment, you may select a new partner on the next assignment if you wish.

**Late policy**

Homeworks will be due at the start of class. Each student will have 5 grace days to use as he/she sees fit. When a student runs out of grace days, assignments may be submitted at a penalty of 20 points per day late. Holidays and weekends are not counted for the purposes of computing days late.

**Cheating policy** As detailed above, you may (and are encouraged to) work with one other person on your homework. You may work with your partner in any way you want as long as (1) you describe the method in a comment in your code and (2) it can reasonably be expected that both partners learned from doing the assignment in the method you selected. With anybody other than your partner, you may of course, discuss course material, but you may not look at or otherwise share each others’ solutions to an assignment.

The simplest rule of thumb is *if I were watching, would you do it or not?*. If you would hide whatever you were doing because the teacher is looking, you are probably cheating. If you honestly think that I would be OK with what you are doing, then you are probably fine. When in doubt, ask me.