CSI 211 Introduction to C++ Programming

Title: Introduction to C++ Programming
Credits: 4
Instructor: TBA
Schedule: Tuesdays and Thursdays, 8:00am-9:15am
Office Hours: by Appointment
Textbooks: C++ HOW TO PROGRAM Latest Edition-
                   DEITEL, Prentice Hall
Lab: Weekly

TENTATIVE Course Outline:

1. Introduction to C++ Programming
   (Computer Organization, Operating Systems, Machine language, Assembly language, Development environment).

2. Structured Program Development in C++
   (Writing a complete C++ Program, cout, cin, Escape sequences, Variable definition, Arithmetic operators, Memory concepts, decision making: Equality and relational operators, Case Study).

3. Selection Control Structures
   (if statement, if/else statement, nested if/else statement, Statement blocks, Logical operators, Short circuiting, Switch statement, Conditional expression operator, Assignment operators, Increment/decrement operators).

4. Iteration
   (While statement, for statement, do/while statement, Nested Loops, Break/Continue statements, Case Study).

5. Functions
   (Standard C++ library functions, Function definition and Prototype, Random number generation, Inline function, Scope rules, exit statement, Default functions, Recursion).

6. C++ Arrays
   (Array definition and declaration, Passing arrays to functions, Bubble sorting arrays, Searching arrays, Case Study)

7. Pointers
   (Pointers definition and declaration, Pointer operators: address and indirection operators, calling functions by reference and constant reference, using constant qualifier with pointers, relationship between pointers and arrays, arrays of pointers, Case Study)

8. Introduction to Classes and Object Oriented Programming
   (Class definition, declaration, private and public key words, Implementation of classes, constructors, destructor, Case Study)

Tests and Assignments:

1. Assignments.
2. Drop quizzes.
3. Two programming Midterms.
4. Final Exam.

Grading Distribution:

1. Assignments: 10%
2. Drop Quizzes: 20%
3. Two Midterms: 30%
4. Final: 40%

Notes:

A weekly assignment will be available in the library a week before it's due on Thursday. ALL students are required to pass by the library and pick them up.