CIS-022B-61Y Intermediate Programming Methodologies in C++ - Fall 2015 CRN 21721

Instructor: Joe Bentley 831.239.8173 (< 9 pm) Email: bentleyjoe@deanza.edu

Office Hours: Thursday 4:45-5:45 pm Location: ATC

Course Description: A systematic approach to the design, construction and management of computer programs, emphasizing design, programming style, documentation, testing and debugging techniques. Strings, multidimensional arrays, structures, and classes. Pointers: their use in arrays, parameters and dynamic allocation, linked lists.

Prerequisite: Computer Information Systems 22A.

Student Learning Outcomes:
- Read, analyze and explain intermediate level C++ programs and their efficiency.
- Design solutions for intermediate level problems using appropriate design methodology incorporating intermediate programming constructs including structures and objects.
- Create algorithms, code, document, debug, and test intermediate level C++ programs.

Textbook: (Required) Starting Out with C++: From Control Structures through Objects, 8th Edition by Gaddis

Programming Assignments: There will be eight programming assignments in the class. The description of each assignment will be posted on the class web page. **Each assignment is due at the beginning of the lecture on the specified due date.** Assignments will be accepted late for 24 hours after the due date. Late assignments will be penalized 5 points. **After 24 hours, assignments will no longer be accepted.** Assignments must be emailed as specified in the assignment description. **Assignments with compiler errors will not be accepted**. Only seven assignments will be used to determine your final grade. Your programming assignment with the lowest grade of the first seven assignments will be discarded. The last assignment grade will not be discarded.

Lab Exercises: There will be 20 short practice programming problems. One will be assigned after each lecture and due at the beginning of the next lecture.

CodeLab Exercises: CodeLab exercises (practice online problems) will be assigned with enforced due dates.

Attendance: You are responsible for all material covered in each class meeting. Programming Assignments and CodeLab Exercises are due on the dates specified, even if you are absent. The midterm and final may only be made up if prior arrangements are made.

Class Format: Class sessions will consist of a lecture/discussion followed by an assigned lab exercise.

Tests: There will be a midterm and a final. Both tests are timed. If you are late for the test, you will not be permitted any extra time. The midterm and the final may only be made up if prior arrangements are made.

Help from the Instructor: It is recommended that you take advantage of the online time, and the instructor's office hours. The instructor is available to answer individual questions, assist with compiler problems, assist with debugging programs, and discuss or clarify assignments. It is also recommended that you make use of email to ask questions.

Grading Policy:

Programming Assignments	140	points 20 each
Lab Exercises	60	" 3 each
Midterm	75	"
Final	125	"
Extra Credit: Codelab	~20	points prorated
Total	**400**	

Percent	**Grade**
90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	F

+ or - added within 2% of grade boundary

You will not be automatically dropped from the class, even if you discontinue attending. It is your responsibility to withdraw by the end of the eighth week of classes.

CIS 22B Class Schedule - Fall 2015 - Tuesday/Thursday 6:00-7:50 pm

Tuesday	Thursday	Read
9/22 Class Introduction and Overview	9/24 Review CIS22A	Chapter 7
9/29 Review CIS22A	10/1 Assignment 1 due Sorting review Binary searching	Chapter 8 10/3 Last date to add class 10/4 Last date to drop w/o grade
10/6 Arrays - Multi-dimensional	10/8 Pointer Arithmetic and Arrays	Chapter 9
10/13 Assignment 2 due Pointers Dynamic Memory Allocation Vectors	10/15 C-Style strings, cctype functions C++ string class	Chapter 10
10/20 Structs	10/22 Assignment 3 due More structs Unions & Enums	Chapter 11 12.7-12.9
10/27 Object Oriented Design	10/29 Assignment 4 due **MIDTERM**	Chapter 13.1
11/3 Introduction to Classes	11/5 Still More Class	Chapter 13
11/10 Constructors and Destructors	11/12 Assignment 5 due More Constructors and Destructors	11/3 Last date to withdraw with a “W” grade
11/17 Static Members, Friends this pointer	11/19 Assignment 6 due Function and Operator Overloading	Chapter 14
11/24 Linked List Stacks and Queues Templates	11/26 **Thanksgiving Holiday** - no class	Chapter 17
12/1 Assignment 7 due Inheritance	12/3 Polymorphism Abstract Classes UML	Chapter 15
12/8 no class - Finals week	**12/10** Assignment 8 due **Final 6:15-8:15 pm**	13.16