CIS 22B - Intermediate Programming Methodologies in C++ - Fall 2014 –Section 04Y, CRN 22583

Instructor: Joe Bentley831.278.0610 (< 9 pm) **Email:** bentleyjoe@deanza.edu

Class Schedule: Lecture: TTh 11:30 am - 2:20 pm Online: T 10:00-11:15 am
Office Hours: Monday & Wednesday 5:15-5:45 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. Introduction to 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: Starting Out with C++: From Control Structures through Objects, 7th or 8th Edition by Gaddis

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 (11:30 am) 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 may not be discarded**.

Lab Exercises: The 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 open book and timed. **If you are late for the test, you will not be permitted any extra time for the test**.

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)	90-100%	(360-400 points) = A
Midterm	60	"	80-89%	(320-359 points) = B
Final	120	"	70-79%	(280-319 points) = C
Lab Exercises	60	" (3 each)	60-69%	(240-279 points) = D
CodeLab	20	"	Below 60%	(< 240 points) = F

Total	400	"	+ or – added if 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 Friday, November 14th to avoid receiving a letter grade (A-F).

CIS 22B – 04Y Class Schedule – Fall 2014 – Joe Bentley

Tuesday	Thursday	Read
9/23 Class Introduction and Overview	9/25 Review CIS22A/CIS71A	Chapter 7
9/30 Review CIS22A/CIS71A Lab Ex #2	10/2 Assignment 1 due Sorting review Binary searching	Chapter 8
10/7 Arrays – Multi-dimensional	10/9 Pointer Arithmetic and Arrays	Chapter 9
10/14 Assignment 2 due Pointers, Dynamic Memory Allocation Vectors	10/16 C-Style strings, cctype functions C++ string class	Chapter 10
10/21 Structs	10/22 Assignment 3 due More structs Unions & Enums	Chapter 11 12.7-12.9
10/28 Object Oriented Design	10/30 Assignment 4 due **MIDTERM**	Chapter 13.1
11/4 Introduction to Classes	11/6 Still More Class	Chapter 13
11/11 Constructors and Destructors	11/13 Assignment 5 due More Constructors and Destructors	
11/18 Static Members, Friends this pointer	11/20 Assignment 6 due Function and Operator Overloading	Chapter 14
11/25 Linked List	11/27 **Thanksgiving Holiday** – no class	Chapter 17
12/2 Assignment 7 due Inheritance	12/4 Polymorphism Abstract Classes UML	Chapter 15
	12/11 Assignment 8 due **Final 11:30 – 1:30 pm**	13.16

Class Web Page: http://voyager.deanza.edu/~bentley