CIS-022B-06Y Intermediate Programming Methodologies in C++ - Winter 2016 CRN 34071

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

Lecture: MW 1:30-3:20 pm / ATC 204 **Online Time:** M 3:30-4:45 pm **Office Hrs**: MW 4:45-5:15 pm / 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 for extra credit.

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	**Percent**	**Grade**
Lab Exercises	60	" 3 each	90-100%	A
Midterm	75	"	80-89%	B
Final	125	"	70-79%	C
Extra Credit: CodeLab	~20	points prorated	60-69%	D
			Below 60%	F
Total	**400**			
			+ 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 - Winter 2016 - Monday/Wednesday 1:30-3:20 pm

Monday	Wednesday	Read
1/4 Class Introduction and Overview	1/6 Review CIS22A	Chapter 7
1/11 Review CIS22A	1/13 Assignment 1 due Sorting review Binary searching	Chapter 8 1/16 Last date to add class 1/18 Last date to drop w/o grade
1/18 HOLIDAY – MLK Birthday	1/20 Arrays - Multi-dimensional	Chapter 9
1/25 Assignment 2 due Pointer Arithmetic and Arrays	1/27 Pointers Dynamic Memory Allocation Vectors	Chapter 10
2/1 C-Style strings, cctype functions C++ string class	2/3 Structs	Chapter 11 12.7-12.9
2/8 Assignment 3 due structs Unions & Enums	2/10 **MIDTERM**	Chapter 13.1
2/15 HOLIDAY – GW Birthday	2/17 Assignment 4 due Introduction to Classes	Chapter 13
2/22 Still More Class	2/24 Constructors and Destructors	2/26 Last date to withdraw with a “W” grade
2/29 Assignment 5 due More Constructors and Destructors	3/2 Static Members, Friends this pointer	Chapter 14
3/7 Assignment 6 due Function and Operator Overloading	3/9 Linked List Stacks and Queues Templates	Chapter 17
3/14 Inheritance	3/16 Assignment 7 due Polymorphism Abstract Classes UML	Chapter 15 13.16
3/21 Assignment 8 due **Final 1:45-3:45 pm**		