## CIS -022B-01Z Intermediate Programming Methodologies in C++ - Fall 2020 CRN 21721

Instructor: Joe Bentley Email: bentleyjoe@deanza.edu

Class Schedule: This class will be taught entirely online using Zoom

**Lecture**: Tuesday and Thursday 1:30 - 3:20 pm **Office Hours:** Tuesday and Thursday 12:45 - 1:15 pm

TA Session: Friday 3:00 - 4:00 pm

**Course Description**: An introduction to computer programming. Its primary objective is to teach problem solving using the C++ programming language. Emphasis will be placed on structured procedural programming with an introduction to object-oriented programming. Designed primarily for computer science and related transfer majors.

**Requisites:** (Not open to students with credit in CIS 22BH.) (Students may receive credit for either (CIS 22A and CIS 22B/22BH) or CIS 27.) **Prerequisite**: CIS 22A.

## **Student Learning Outcomes:**

- Create algorithms, code, document, debug, and test intermediate level C++ programs.
- 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.

Textbook: Starting Out with C++: From Control Structures through Objects, 9th Edition by Gaddis

**Assignments**: There will be **eleven** assignments. Each assignment is due at the **beginning** of the class session on the specified date. Late assignments will be accepted for 24 hours after the due date and will be assessed 5 points. Assignments must be completed individually. **Assignments with compile errors or runtime errors will not be accepted**. Ten assignments will be used for your grade. Your assignment with the lowest grade will be discarded.

**Lab Exercises:** There will be 11 lab exercises assigned on every Tuesday and due before the Thursday lecture. Lab exercises will not be accepted late. Your lab exercise with the lowest grade will be discarded.

Attendance: You are responsible for all material covered in each class meeting. Assignments and Lab Exercises are due on the dates specified, even if you are absent. Tests may be made up only by prior arrangement.

**Tests**: There will be a midterm and a final. The midterm and final will be timed and given online. If you are late starting the test, you will not be permitted extra time.

**Help from the Instructor**: It is recommended that you take advantage of the office hours, email, and any extra meetings. The instructor can answer questions, debug programs, and clarify assignments.

Academic Integrity: Students are required to follow the Academic Integrity guidelines (<a href="https://www.deanza.edu/policies/academic\_integrity.html">https://www.deanza.edu/policies/academic\_integrity.html</a>). Any student who copies an assignment, exercise, or test or uses work performed by someone else will receive a grade of 0 on that assignment, exercise, or test. Any student who allows their assignment, exercise, or test to be copied will also receive a grade of 0 for that assignment, exercise or test.

**Disability Support:** Students who have been found to be eligible for accommodations by Disability Support Services (DSS), please follow up to ensure that your accommodations have been authorized for the current quarter. If you are not registered with DSS and need accommodations, please go online to https://www.deanza.edu/dsps/ for additional information.

## **Grading Policy:**

Programming Assignments	200 points 2	20 each	Points	Percent	Grade
Lab Exercises	50 points	5 each	450-500	90-100%	Α
Midterm	100 points		400-449	80-89%	В
Final	150 points		350-399	70-79%	С
Extra Credit: CodeLab	~10 points p	ororated	300-349	60-69%	D
			Below 300	Below 60%	F
Total	500 points		+ or – added if v	vithin 2% of grade boundary	

You may be dropped from the class if you miss the midterm or turn in less than half of the required assignments. If you decide to drop the class, you must withdraw by the end of the 8<sup>th</sup> week.

CIS 22B Class Schedule – Spring 2020 – Joe Bentley

Tuesday	Thursday	Read	Dates
9/22 Class Introduction and Overview	9/24 Review File I/O, Functions Exercise 1 due	Chapter 7	
9/29 Review Functions, Arrays Assignment 1 due	10/1 Review Sorting, Searching Exercise 2 due	Chapter 8	10/3 Last date to add 10/4 Last date to drop without "W" grade
10/6 Arrays – Multidimensional	10/8 Pointer Arithmetic and arrays	Chapter 9	
Assignment 2 due	Exercise 3 due		
10/13 Pointers Dynamic Memory Allocation Assignment 3 due	10/15 C-Style strings cctype functions Exercise 4 due	Chapter 10	10/16 Last date to change grade mode to "P/NP"
10/20 C++ string class Assignment 4 due	10/22 Structs Unions and enums Exercise 5 due	Chapter 11	
10/27 MIDTERM	10/29 Introduction to classes	Chapter 13	
Assignment 5 due	Exercise 6 due		
11/3 More Class	11/5 Constructors and destructors		
Assignment 6 due	Exercise 7 due		
11/10 Constructors and destructors	11/12 Static members, friends this pointer	Chapter 14	11/13 Last date to drop with a "W" grade
Assignment 7 due 11/17 Operator Overloading	Exercise 8 due 11/19 Linked list	Chapter 15	
Assignment 8 due	Exercise 9 due		
11/24 Inheritance	11/26 THANKSGIVING HOLIDAY Exercise 10 due	Chapter 15 Section 13.15	
Assignment 9 due			
12/1 Polymorphism Abstract classes Assignment 10 due	12/3 UML Review Exercise 11 due		
12/8 FINAL 11:30 – 1:30 pm			
Assignment 11 due			

Class Web Page: <a href="http://voyager.deanza.edu/~bentley/cis22b">http://voyager.deanza.edu/~bentley/cis22b</a>