CIS 22B **SPRING, 2015**
INTERMEDIATE PROGRAMMING METHODOLOGIES IN C++

INSTRUCTOR: Mary Pape
OFFICE: F51i
PHONE: (408) 864-8877 **E-MAIL:** PapeMary@fhda.edu
OFFICE HOURS: Monday 4:30 p.m.-5:20 p.m. (F51i)
Tuesday 1:20 p.m.-2:10 p.m. (F51i)
Wednesday 3:00 p.m. – 3:50 p.m.
Thursday 10:00 a.m. – 11:00 a.m.

CLASS HOURS: TTh 11:30 a.m. – 1:20 p.m. (AT 204)
Online Thursday 1:20 p.m. – 2:35 p.m.
FINAL: Friday, June 26 at 11:30 a.m.-1:30 p.m. (AT 204)

Prerequisites:
(Students may receive credit for either Computer Information Systems (22A and 22B) or 27, but not both.)
Prerequisite: Computer Information Systems 22A. (Formerly Computer Information Systems 71B.)Four hours lecture, one and one-half hours laboratory (66 hours total per quarter).

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.

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.

Course Outline: Please refer to course calendar.

Attendance:
You are expected to attend all class sessions. Lectures will be the main source of information for both labs and exams.

You will **not** be automatically dropped if you do not come to class. Thus, be sure to withdraw officially to avoid 'F' grade on your transcript.

Required Text:
Solutions for Starting Out with C++: From Control Structures through Objects, 8th Edition by *Gaddis* ISBN-10: 0-13-376939-9 • ISBN-13: 978-0-13-376939-5

Assistance:
CodeBlocks Compiler may be downloaded for free from http://sourceforge.net/projects/codeblocks/files/Binaries/10.05/Windows/codeblocks-10.05mingw-setup.exe/download .

Course materials are available https://catalyst.deanza.edu.

Teaching assistants are available to help you. Schedule will be posted at http://deanza.edu/cis/tutoring.html. Sign-in AT203 CIS desk.

Grading:

Quizzes on homework(4)	100 points
Class participation	90 points
(Hands On & CodeLab DEAN-19126-SYBP-24)	
Programming Lab Assignments (6)	240 points
Midterms (2)	200 points
Final	170 points

Course letter grades will be assigned:

A+	A	A-	B+	B	B-	C+	C	D	F
99+%	92-98%	90-91%	88-89%	82-87%	80-81%	78-79%	70-78%	60-69%	<60%

Where percentages are rounded to the nearest whole number.

Lab assignments will be graded on the following criteria:
1) correctness
2) structure
3) style, clarity, and documentation
4) theme issues

Late assignments will be accepted for one week after the due date with a 5 point penalty. After the one-week limit the assignment will receive no credit.

E-mail messages and questions to PapeMary@fhda.edu. For security purposes unsolicited attachments will not be downloaded.

Extra credit opportunities:

- Extra credit includes five (5) points for being at the instructor's computer.
- Several labs will have bonus points added when solution is creative, documentation is extra informative, lab is submitted early, and/or code is exceptionably easy to read.

Academic Honesty
All programming assignments are expected to be your own original code. **Never give a soft copy or a hard copy of any lab assignment to another classmate.** Any duplicate assignments submitted will receive zero points without regard to who originated and who copied.

CIS 22B Class Schedule – Spring 2015

Tuesday	Thursday	Read
4/7 Review Function Pointer Arithmetic Review Files	4/9 One-dimensionaL arrays - Binary Search One-dimensionaL arrays - Insertion Sort Pointers & 1-D arrays	8.1, 9.1 - 9.7
4/114 Pointer Usage Dynamic Memory Allocation	4/16 Lab 1 due Arrays of pointers Quiz 1	9.8-9.10
4/21 C Strings	4/23 Quiz 2 (9.8-9.10 & C Strings) C++ String class	10.3-10.6 10.7
4/28 Structures: as abstract data type, declaration, accessing fields, arrays of structures	4/30 Lab 2 due Midterm 1 (Chapters 7 – 10 More on structures: nested structures, Passing to a function	11.1 – 11.5, 11.7 – 11.8
5/5 Pointers to structures Nested structures	5/7 Intro to Object Oriented Programming	11.6, 11.9-10 13.1, 13.2
5/12 OOP Methods, UML Design	5/14 Lab 3 due Multiple Files Inline Functions	13.3 – 13.6
5/19 Constructors and Destructors	5/21 Overloading Constructors	13.7 – 13.11
5/26 Quiz 3 Arrays of Objects	5/28 Lab 4 due Static Members, Friends this pointer	13.7 – 13.11 13.12 14.1, 14.2
6/2 Function and Operator Overloading	6/5 Midterm 2 (Chapters 11 & 13) Inheritance	14.5 15.1 – 15.4
6/9 Polymorphism & virtual functions	6/11 Lab 5 due Linked Lists	15.6 Chapter 17
6/16 Quiz 4 Two-dimensional Arrays	6/18 Lab 6 due Multi-dimensional arrays	7.8-7.9
FINAL: FRIDAY, JUNE 26 11:30 A.M. – 1:30 P.M.		

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What is this online time about? Whether during this exact time or a time of your choice, students are expected to be online reviewing materials, completing tutorial assignments, completing online participation activities, and preparing for the next topic of the course prior to the weekly lecture and lab meetings.

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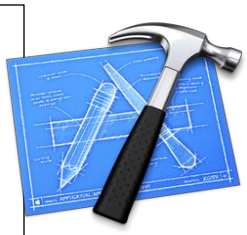
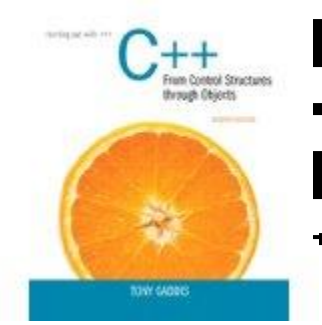
- Create algorithms, code, document, debug, and test intermediate level C++ programs.





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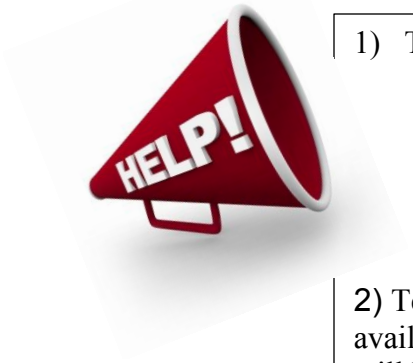

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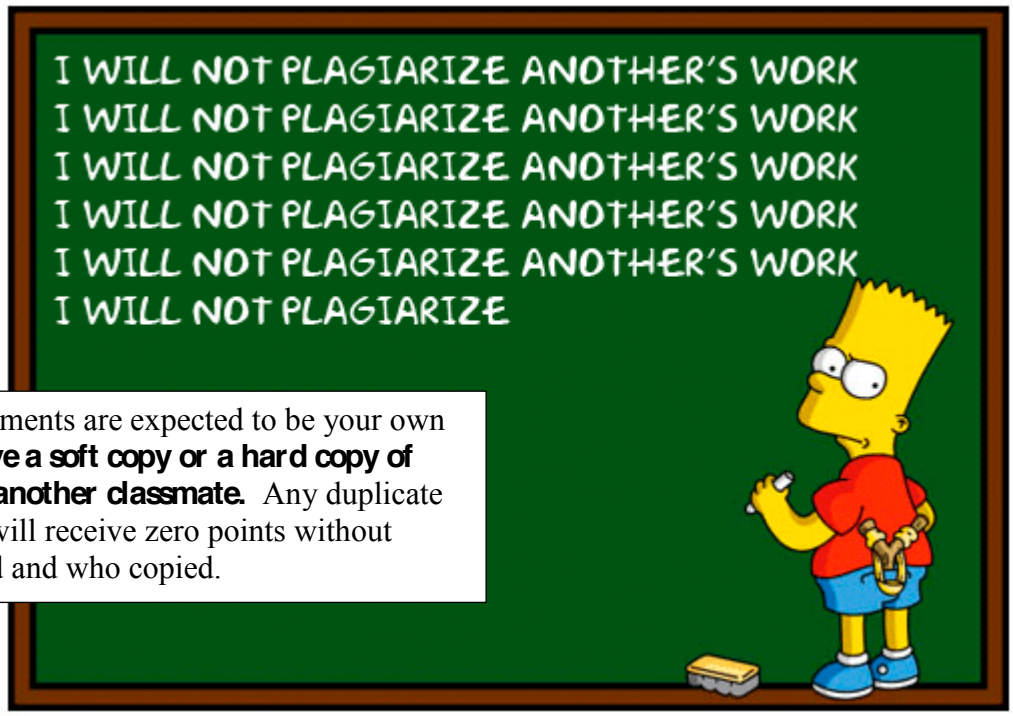

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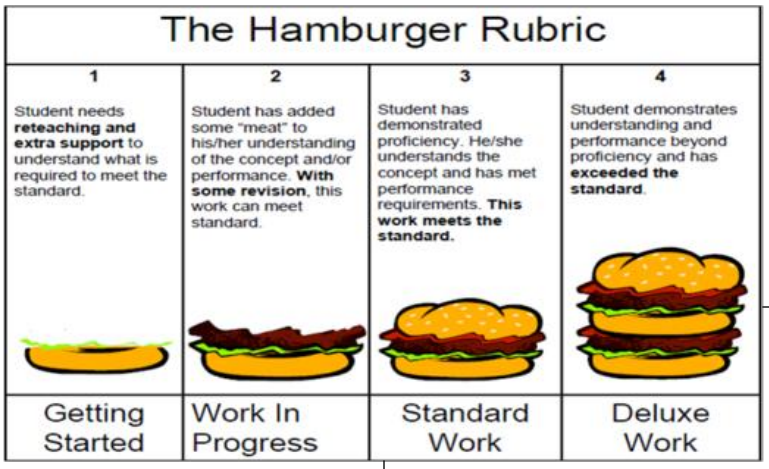

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