

CIS 22A

Fall 2017

BEGINNING PROGRAMMING METHODOLOGIES IN C++

INSTRUCTOR: Mary Pape

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FINAL: **Mandatory Proctored Final**

Tuesday, December 12, 2017 from 6:00 – 8:00 pm in ATC 203 Area A

OFFICE HOURS: Monday 4:40 p.m.-5:30 p.m. (AT 203 &/or online)
Tuesday 1:40 p.m.- 2:30 p.m. (AT 203 &/or online)
Wednesday 3:00 p.m. – 3:50 p.m. (AT 203 &/or online)
Thursday 11:30 a.m. – 12:20 p.m. (AT 203 &/or online)

Prerequisites:

Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 114 or equivalent. CIS 22A was formerly Computer Information Systems 71A. (Students may receive credit for either Computer Information Systems (22A and 22B) or 27, but not both.)

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.

Student Learning Outcome: Design solutions, create algorithms, code, document, debug, and test introductory level C++ programs incorporating elementary programming constructs.

Student Learning Outcome: Read, analyze and explain introductory level C++ programs.

Course Outline: Please refer to course calendar below.

Attendance:

You are expected to participate in all cccConfer sessions or view the webinar/video after it is posted.

You will **not** be automatically dropped once you have completed the introductory survey assignment. 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, 9th Edition by *Gaddis* ISBN-10: 0-13-376939-9 • ISBN-13: 978-0-13-376939-5 **This is the same text as used in CIS 22B** N.B. Earlier editions will suffice **but page numbers will be off.**

Assistance:

- **Integrated Development Environments (IDEs) - alias compilers**
 - [Dev C++](#) Source code 9.0 MB *Easiest to get started with for PC user.*
 - [Microsoft® Visual Studio®](#)
 - Mac users use [Xcode](#)
- Course materials are available on <https://deanza.instructure.com/login> .
- CIS has its own teaching assistants program. Sign up in ATC 203 – CIS Lab.
<http://www.deanza.edu/cis/tutoring.html>
- One-on-one tutoring <http://www.deanza.edu/cis/tutoring.html>
- Drop in during my regularly **scheduled on campus office hours**. Please refer to times on my website: <http://www.deanza.edu/faculty/papemary/>

Grading:

Programming Lab Assignments (8)	300 points (35.71%)
Class/Online Participation (alias “Hands On”)	55 points (6.55%)
Online Tutorial Work (CodeLab Assignments)	45 points (5.36%)
Quizzes on homework (lowest score is dropped)	40 points (4.76%)
Midterms (2)	200 points (23.81%)
Final	200 points (23.81%)

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.

Programming Lab assignments will be graded on the following criteria:

- | | |
|----------------|--------------------------------------|
| 1) correctness | 3) style, clarity, and documentation |
| 2) structure | 4) theme issues |

Late Lab 0 – 6 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. Lab 7 and the “Hands On” Online Activities will not be accepted late. Quizzes, midterms, final must be taken on calendared dates.

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

All assignments/tests submitted through Canvas LMS only.

Extra credit opportunities:

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.**

Motto:

“You learn to play tennis by playing tennis. You learn to program by writing programs.”

Important Dates

Saturday, October 7: Last day to add.


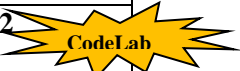

Sunday, October 8: Last day to drop with no grade of record and with refund

Friday, November 17: Last day to drop with a ‘W’.

September

Topic	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Parts of a Compute; Programming Languages; *First Program (1.1 -> 1.7, 2.1->2.2, 3.1)	25	26	27	28	29	30 Intro Survey	1


October

*Binary Number System; *Design Tools; Fundamentals of 'C++' (2.3 -> 2.16)	2	3 Lab 0	4	5	6	7 Lab 1(A & B)	8 
Expressions & their evaluation (3.2 -> 3.6); More about I/O (3.7-3.8) Math "Built-In" Functions (3.9)	9	10	11	12	13 Quiz 1	14	15
Functions with no parameters (6.1->6.3) Selection (4.1 -> 4.9)	16	17	18	19 Lab 2	20 Quiz 2	21	22 
Selection (4.10 -> 4.14) Functions with parameters (6.4)	23	24	25	26 Lab 3	27 Mid-term 1 (Ch 1-3)	28	29 
Introduction to loops (while loops) (5.1 -> 5.4) Looping(5.7, 5.8)	30	31					

November

Introduction to loops (while loops) (5.1 -> 5.4) Looping (5.7, 5.8)			1	2	3 Quiz 3	4	5
<i>do while & for loops</i> (5.5 -> 5.6, 5.9) Nested loops (5.10) Loops with Files (5.11)	6 	7	8	9	10 <i>Veterans Day</i>	11 Lab 4	12
Inter-Function Communication (6.5-> 6.13)	13	14	15	16	17 Quiz 4	18	19
Overloading Functions (6.14) One-dimensional arrays (7.1 -> 7.2)	20 	21	22	23	24	25 <i>Thanksgiving Recess</i>	26 Lab 5
One-dimensional arrays (7.3 -> 7.7)	27	28	29	30			

December

One-dimensional arrays (7.3 -> 7.7)					1 Midterm 2 (Ch 4-6)	2	3
Linear Search (8.1) Selection Sort (8-5 p. 374)	4 Lab 6	5	6	7	8 Quiz 5	9 Lab 7	10
Week of Finals	11 	12 Final (6:00 pm-8:00 pm)					

I. CodeLab Instructions

How/Where to register:

1. Go to www.tcgo1.com OR www.tcgo2.com
2. Click "Register for CodeLab"
3. Later, during enrollment, use the following Section Access Code: **DEAN-25906-CZVP-34**

II. Code Lab Assignments

Go to www.tcgo1.com OR www.tcgo2.com . Click "**Login to CodeLab**". The username is the email address given during registration. The password is the password selected during registration.

Ref	Chapter	# of Exercises	Minimum to be completed	Due Date
CodeLab 1	Chapter 2: Intro to C++	126	15	October 8 (midnight=11:59)
CodeLab 2	Chapter 3: Structure of a C++ Program	55	15	October 20 (midnight)
CodeLab 3	Chapter 6: Functions	61	15	October 29 (midnight)
CodeLab 4	Chapter 4: Decisions	77	15	November 6 (midnight)
CodeLab 5	Chapter 5: Loops	66	15	November 20 (midnight)
CodeLab 6	Chapter 7: Arrays	68	15	December 11 (midnight)

III. Assignments from text

These assignments will be "collected" through quizzes, midterms, and final. I use these and the CodeLab questions to create questions for quizzes, midterms, and final.

#1	Quiz 1 Midterm 1 Final	Chapter 1: 1, 3, 7, 9-29, 31, 33-35 Binary Worksheet Chapter 2: 4, 8, 9-21, 27
#2	Quiz 2 Midterm 1 Final	Chapter 3: p. 136: 4, 5, 26, 34, 36
#3	Quiz 3 Midterm 2 Final	Chapter 4: 31-41
#4	Quiz 4 Midterm 2 Final	Chapter 5: 36, 37, 39, 40, 41, 42, 43, 44
#5	Midterm 2 Final	Chapter 6: 2, 33, 34, 37
#6	Final	Chapter 7: 2, 4, 41, 42, 43 Chapter 8: 2, 3

N. B. The final is comprehensive

IV Tentative Programming Lab Problems

Lab 0	Student Information
Lab 1	1A-D: Type in code; MPG p. 82; Sphere surface area & volume; converting number of coins to value
Lab 2	P. 144 #14
Lab 3	TV/VCR Problem
Lab 4	De Anza Bookstore
Lab 5	Monthly House Costs
Lab 6	Retirement of Bonded Debt
Lab 7	Grades with one-dim arrays