

CIS 22A

Winter 2018

**BEGINNING PROGRAMMING METHODOLOGIES IN C++**

**INSTRUCTOR:** Mary Pape

**PHONE:** (408) 864-8877

**E-MAIL:** [PapeMary@fhda.edu](mailto:PapeMary@fhda.edu)

**FINAL:**

**Mandatory Proctored Final On Campus**

**Tuesday, March 27, 2018 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 for introductory level problems using appropriate design methodology incorporating elementary programming constructs.*

**Student Learning Outcome:** *Create algorithms, code, document, debug, and test introductory level C++ programs.*

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

**Course Outline:** Please refer to course calendar below.

**Attendance:**

In order not to be dropped as a “no-show” you must complete the introductory video by **Saturday, January 13**. You are expected to participate in all cccConfer sessions or view the webinar/video after it is posted. You are expected to login into Canvas at least once per day. You must attend the on-campus final exam as scheduled.

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-13: 978-0134498379 ISBN-10: 0134498372 **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> .
- E-mail messages and questions to [PapeMary@fhda.edu](mailto:PapeMary@fhda.edu) (not through Canvas). For security purposes, unsolicited attachments will not be downloaded. Emails received Monday through Friday will be answered within 24 hours. Phone conferences will also be offered as needed but student needs to provide phone number and accept blocked caller ID.
- 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.**

All assignments/tests submitted through Canvas LMS only. Assignments submitted on time will receive feedback within one week. Assignments submitted early receive feedback in less time, usually within 24 hours.

**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 exceptionally 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.”

## **Disability Accommodations:**

De Anza College views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students.

Disability Support Services (DSS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact DSS to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with DSS and have accommodations set by a DSS counselor, please be sure that your instructor has received your accommodation letter from Clockwork early in the quarter to review how the accommodations will be applied in the course. Students who need accommodated test proctoring must meet appointment booking deadlines at the Testing Center. a) Midterm exam be booked at least five (5) business days in advance of the instructor approved exam date/time. b) Final exams must be scheduled seven (7) business days/weekdays in advance of the instructor approved exam date/time. Failure to meet appointment booking deadlines will result in the forfeit of testing accommodations and you will be required to take your exam with the class.

DSS Location: RSS Building, Suite 141 <http://www.deanza.edu/DSS/> Phone: 408-864-8753 Email: [DSS@deanza.edu](mailto:DSS@deanza.edu)


## ***Important Dates***

**Saturday, January 20:** Last day to add.




**Sunday, January 21:** Last day to drop with no grade of record

**Friday, March 2:** Last day to drop with a ‘W’.



## January

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)	8	9	10	11	12	13 Intro Survey	14
*Binary Number System; *Design Tools; Fundamentals of 'C++' (2.3 -> 2.16)	15 <i>MLK</i>	16 Lab 0	17	18	19	20 Lab 1(A & B)	21 
Expressions & their evaluation (3.2 -> 3.6); More about I/O (3.7-3.8) Math "Built-In" Functions (3.9)	22	23	24	25	26 Quiz 1	27	28
Functions with no parameters (6.1->6.3) Selection (4.1 -> 4.9)	29	30	31				

## February

Functions with no parameters (6.1->6.3) Selection (4.1 -> 4.9)				1 Lab 2	2 Quiz 2	3	4 
Selection (4.10 -> 4.14) Functions with parameters (6.4)	5	6	7	8 Lab 3	9 Mid- term 1 (Ch 1-3)	10	11 
Introduction to loops (while loops) (5.1 -> 5.4) Looping (5.7, 5.8)	12	13	14	15 Quiz 3	16	17	18
<i>do while</i> & <i>for</i> loops (5.5 -> 5.6, 5.9) Nested loops (5.10) Loops with Files (5.11)	19	20	21	22	23	24 Lab 4	25 
Inter-Function Communication (6.5-> 6.13)	26	27	28				

## March

Inter-Function Communication (6.5-> 6.13)				1	2 Quiz 4	3	4 
Overloading Functions (6.14) One-dimensional arrays (7.1 -> 7.2)	5	6	7	8	9	10 Lab 5	11
One-dimensional arrays (7.3 -> 7.7)	12	13	14	15	16 Midterm 2 (Ch 4-6)	17 Lab 6	18
Linear Search (8.1) Selection Sort (8-5 p. 374)	19	20	21	22	23 Quiz 5	24 Lab 7	25 
Week of Finals	26	27 Final (6:00 pm- 8:00 pm)					

All assignments must be turned in by 6:00 pm. on Tuesday, March 28th– *No Exceptions*

## I. CodeLab Instructions

### How/Where to register:

1. Go to [www.tcgo1.com](http://www.tcgo1.com) OR [www.tcgo2.com](http://www.tcgo2.com)
2. Click "**Register for CodeLab**"
3. Later, during enrollment, use the following Section Access Code: (**Not yet known**)

### Code Lab Assignments

Go to [www.tcgo1.com](http://www.tcgo1.com) OR [www.tcgo2.com](http://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
CL 1	Chapter 2: Intro to C++	126	15	January 21 (midnight=11:59)
CL 2	Chapter 3: Structure of a C++ Program	55	15	February 4 (midnight)
CL 3	Chapter 4: Decisions	77	15	February 11 (midnight)
CL 4	Chapter 5: Loops	66	15	February 25 (midnight)
CL 6	Chapter 6: Functions	61	15	March 4 (midnight)
CL 6	Chapter 7: Arrays	68	15	March 25 (midnight)

## III. Assignments from text

*These assignments will be "collected" through quizzes, midterms, and final.*

#1	Quiz 1 Midterm 1 Final	Chapter 1: p. 24: 1, 3, 7, 9-29, 31, 33-35 Binary Worksheet Chapter 2: p. 77: 4, 8, 9-21, 27 (page 75 for 8 <sup>th</sup> ed.)
#2	Quiz 2 Midterm 1 Final	Chapter 3: p. 138: 4, 5, 26, 34, 36 (page 136 for 8 <sup>th</sup> ed.)
#3	Quiz 3 Midterm 2 Final	Chapter 4: p. 217: 31-41 (page 215 for 8 <sup>th</sup> ed.)
#4	Quiz 4 Midterm 2 Final	Chapter 5: p. 293: 36, 37, 39, 40, 41, 42, 43, 44 (page 289 for 8 <sup>th</sup> ed.)
	Midterm 2 Final	Chapter 6: p. 369: 2, 33, 34, 37 (page 363 for 8 <sup>th</sup> ed.)
#6	Final	Chapter 7: p. 449: 2, 4, 41, 42, 43 (page 443 for 8 <sup>th</sup> ed) Chapter 8: p. 498: 2, 3 (page 490 for 8 <sup>th</sup> ed)

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. 146 #14 (page 144 for 8 <sup>th</sup> ed.)
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