

INSTRUCTOR: Cynthia Lee-Klawender

(<http://www.deanza.edu/faculty/leeklawendercynthia/>)

OFFICE HOURS, OFFICE: Mondays and Wednesdays 1:30-2:20 PM (in F41C or AT203); Tuesdays and Thursdays 12:50 - 1:15 PM (in F41C and 3:25 - 3:50 (in F41C or AT203), or by appointment in F41C (in the L quad between L4 & L6 buildings)

PHONE & EMAIL: (408) 864-8609, E-mail for questions or help:

**LeeKlawenderCynthia@deanza.edu**

ADVISORY: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 114 or equivalent.

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 OUTCOMES:

- Design solutions for introductory level problems using appropriate design methodology incorporating elementary programming constructs.
- Create algorithms, code, document, debug, and test introductory level C++ programs.
- Read, analyze and explain introductory level C++ programs.

TEXTBOOK: *Starting Out with C++: From Control Structures through Objects* by **Tony Gaddis**. 8th EDITION (ISBN-13: 978-0133769395 ISBN-10: 0133769399)

LECTURE NOTES: Will be provided online on Catalyst

CLASS NOTES: Many of the class exercise answers and announcements will be posted in Catalyst (<https://catalyst.deanza.edu>) on a week-by-week basis.

COMPUTER LAB: You may use our computer lab or your own (or another) computer and compiler. If you don't use our computer lab, you need to have a C++ compiler in order to do homework assignments. If you're enrolled in this class, you will automatically have an account in our classroom and AT203 Open Computer Lab (if you're adding, add online in Admissions office, wait about 20 min. before using the open lab). Bring a flash drive to the Computer Lab to back up your programs or remember to email to yourself.

COURSE OUTLINE (subject to change): This is a hybrid class. Meet in person on Mondays and Wednesdays, 1:30-3:20 PM. The rest will be presented in Catalyst. The instructor will be online Fridays, 1:30-2:45 PM.

|        | <u>Dates</u> | <u>Topics</u>   | <u>Resources</u>                |
|--------|--------------|---|---------------------------------|
| Week 1 | Apr. 6 - 12  | Computer Hardware & Languages, Computer Problem Solving | Catalyst Topic 1, Textbk. Ch. 1 |
| Week 2 | Apr. 13 - 19 | Intro. to C++   | Catalyst Topic 2, Textbk Ch. 2  |

|         |                    |  |  |
|---------|--------------------|--|--|
| Week 3  | Apr. 20 - 26       | Expressions and Interactivity  | Catalyst Topic 3, Textbk Ch. 3                                   |
| Week 4  | Apr. 27 - May 3    | Making Decisions (if, logical ops)   | Catalyst Topic 4, Textbk Ch. 4                                   |
| Week 5  | May 4 - 10         | <b>Test 1</b><br><i>switch</i> statement<br><br>++, -- operators, <i>while</i> loops | Catalyst Topic 4, Textbk Ch. 4<br>Catalyst Topic 5, Textbk Ch. 5 |
| Week 6  | May 11 - 17        | Loops ( <i>do-while</i> loops, <i>for</i> loops)                                     | Catalyst Topic 5, Textbk Ch. 5                                   |
| Week 7  | May 18 - 24        | Nested Loops, Files  | Catalyst Topic 5, Textbk Ch. 5                                   |
| Week 8  | May 25 - 31        | <i>HOLIDAY May 25</i><br>Functions   | Catalyst Topic 6, Textbk Ch. 6                                   |
| Week 9  | Jun. 1 - 7         | <b>Test 2</b><br>Functions   | Catalyst Topic 6, Textbk Ch. 6                                   |
| Week 10 | Jun. 8 - 14        | One-dimensional Arrays   | Catalyst Topic 7, Textbk Ch. 7                                   |
| Week 11 | Jun. 15 - 21       | Linear Search, Selection Sort  | Catalyst Topic 8, Textbk Ch. 8.1, 8.3                            |
| Week 12 | Jun. 22<br>Jun. 24 | Review for the Final Exam<br><b>FINAL EXAM</b> Wed., Jun. 24 at 11:30 a.m.-1:30 p.m. | Comprehensive  |

EVALUATION: Homework Assign. (6) 24% (Each assign. weight= 4%)  
 Participation 15% (inc. CodeLab+lab exercises)  
 Quizzes 8% (Best 4 out of 6 count)  
 Tests (2) 30% (Each test weight= 15%)  
 Final Exam 23%  
 100%

MAKE-UP TESTS: NO MAKE-UP TESTS WILL BE GIVEN! Please notify the instructor ASAP if you know ahead of time you will be missing a test.

EXTRA CREDIT: Maximum of 5 extra credit projects may be counted! If the project is other than given with the lab assignments, it must be approved by the instructor before they are attempted or it may not be accepted. This will be discussed later in the semester. The extra credit projects are due at the final exam, and *must include the source file(s) and output.* (Note: Extra credit will only be counted if the student is receiving less than an A+.)

WITHDRAWING FROM CLASS: I will not automatically drop anyone from class, even if you stop attending classes. If you wish to discontinue the class,

you must go the Admissions Office and turn in a signed drop card or you may receive an 'F' in the class.

PROGRAMMING HOMEWORK GRADING: Each will be graded as follows:

- 26 points: Does the program correctly & completely solve the problem?
- 6 points: Is the listing commented & indented? Will I understand what the program is doing? Is the program efficient?
- 10 points: Is the program design included and complete?
- 8 points: ON TIME! (1 point deducted starting day after due date + every other day late--CAN'T TURN IN 3 WEEKS after due date!)

50 points possible (for each programming assignment)

NOTE: NOTHING WILL BE ACCEPTED AFTER **Fri., June 26, 11:59 PM!**

GRADING BREAKDOWN (adding each score/max-points \* weight):

|    |                 |                  |      |
|----|-----------------|------------------|------|
| A+ |                 | Total Percent >= | 97.0 |
| A  | 90.5            | <= Total %<      | 97.0 |
| A- | 87.5            | <= Total %<      | 90.5 |
| B+ | 84.5            | <= Total % <     | 87.5 |
| B  | 80.5            | <= Total % <     | 84.5 |
| B- | 77.5            | <= Total% <      | 80.5 |
| C+ | 74.5            | <= Total% <      | 77.5 |
| C  | 69.5            | <= Total% <      | 74.5 |
| D+ | 65.5            | <= Total% <      | 69.5 |
| D  | 60.5            | <= Total% <      | 65.5 |
| D- | 57.5            | <= Total% <      | 60.5 |
| F  | Total Percent < |                  | 57.5 |

PARTICIPATION DETAILS:

- Lab exercises & participation will be 10% of your total %
- CodeLab exercises will be 5% of your total % (login information and exercises to do are in Catalyst)