INSTRUCTOR: Cynthia Lee-Klawender
          (http://www.deanza.edu/faculty/leeklawendercynthia/)
OFFICE HOURS, OFFICE: Mondays and Wednesdays 12:45-1:15 PM and 3:25 -
          3:45 (in F41C or AT203); Tuesdays and Thursdays 2:50-3:15 PM (in
          F41C) and 5:25-5:50 PM in AT312, or by appointment in F41C (between
          L4 & L6 buildings)
PHONE & EMAIL: (408) 864-8609, E-mail for questions or help:
          LeeKlawenderCynthia@deanza.edu
PREREQUISITE: CIS 22A or equivalent (for 15AG students, review C at:
                    http://voyager.deanza.edu/~cis_review)
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.
COURSE STUDENT LEARNING OUTCOMES:
   • Design solutions for intermediate level problems using appropriate design
     methodology incorporating intermediate programming constructs.
   • Create algorithms, code, document, debug, and test intermediate level C++
     programs.
   • Read, analyze and explain intermediate 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) (7th Edition will be OK)

LECTURE NOTES: Will be provided online on Catalyst

CLASS NOTES: Many of the problems we solve in class and announcements will be
          posted in Catalyst (https://catalyst.deanza.edu) at least twice per week.

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 course. Class will meet
          on campus on Tuesdays and Thursdays 3:30-5:20 PM in room AT312.
          The instructor will be online on Catalyst on Fridays 4:30-5:50 PM.

Week of	Topics	Resources

Week 1	Sep. 22 - 28	Review of One-dim. Arrays, Binary Search, Insertion Sort Program Design review	Catalyst lesson 1, Textbk Ch. 8 Catalyst Notes on Design
Week 2	Sep. 29 - Oct. 5	Pointers, pointer arithmetic in an array, pointer parameters	Catalyst lesson 3, Textbk Ch. 9.1 - 9. 7
Week 3	Oct. 6 - 12	Dynamic allocation, arrays of pointers	Catalyst lesson 3, Textbk Ch. 9.8, 9.9, 9.10
Week 4	Oct. 13 - 19	C Strings C++ Strings	Catalyst lesson 4, Textbk Ch. 10* Catalyst lesson 4, Textbk Ch. 10.7
Week 5	Oct. 20 - 26	Abstract Data Types & Structures **Test 1**	Catalyst lesson 5, Textbk Ch. 11*
Week 6	Oct. 27 - Nov. 2	Intro. to Object-Oriented Prog. Classes	Catalyst lesson 6, Textbk 13.1 Catalyst lesson 6, Textbk Ch. 13*
Week 7	Nov. 3 - 9	Arrays of structs, arrays of classes, Friend functions, Operator overloading	Catalyst lesson 7, Textbk Ch. 13*, Ch. 14.2, 14.5
Week 8	Nov. 10 - 16	Inheritance	Catalyst lesson 8, Textbk Ch. 15*
Week 9	Nov. 17 - 23	Intro. to Linked Lists **Test 2**	Catalyst lesson 10, Textbk 17.1 & 17.2
Week 10	Nov. 24 - 30	Two Dimensional Arrays, Multi-dimensional Arrays HOLIDAYS NOV. 27-30	Catalyst lesson 2, Textbk Ch. 7.8, 7.9
Week 11	Dec. 1 - 7	Object-oriented Design, UML	Catalyst lesson 9, Textbk Ch. 13*
Week 12	Fri., Dec. 12	**FINAL EXAM 4-6 PM in AT312**	Comprehensive

*see Catalyst for exact sections of the textbook chapter

EVALUATION: Prog. Assignments (5)   30% (Each = 6%)
               Participation   14% (includes CodeLab)
               Tests (2)   32% (Each test = 16%)
               Final Exam   <u>24%</u>
                                             100%

MAKE-UP TESTS: NO MAKE-UP TESTS WILL BE GIVEN! Please notify the
        instructor ASAP if you know 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 programming 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 by 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+.)
PROGRAMMING HOMEWORK GRADING: Each will be graded as follows:
            24 points: Does the program correctly & completely solve the problem?
             8 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., Dec. 12, 11:59 PM**!

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 yourself to officially drop from the class or you may receive a grade
      of 'F'.

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:
   • Participating in class (mostly lab exercises) will be 10% of your total %
   • CodeLab exercises will be 4% of your total %
    (login information will be given in Catalyst)