

2016, Fall

CS-1 Course Syllabus

General Information

Lecture/Lab:

- Monday/Wednesday, 11:00 - 13:45

Building 2400, Room 2416

Instructor: Bill (William) Komanetsky

Email: bkomanetsky@laspositascollege.edu

Office: 2100/2155 (Office Hours Posted on Blackboard)

Course Content and Expectations

Course Content/Outline

Problem solving techniques and algorithms; program design, development, style, testing and debugging. C++ syntax covered includes: variables; data types; operators and expressions; control structures; library and user-defined functions; basic input/output; arrays; user-defined data structures.

Prerequisites

Strongly Recommended: Mathematics 107 (completed with a grade of "C" or higher).

Learning Outcome(s)

The student will be able to affectively write a console-based C/C++ program which queries the end user for information, processes that information, and then outputs these results as displayed or stored on secondary storage media (Disk drive, CD-ROM, Memory stick, etc.). The understanding of data structures, and sorting/searching methods will be part of the knowledge the student will come away with as part of the processing of end user inputted information. The tools used in this course will benefit the student (after graduating with a computer science degree) in their search for jobs in the computer industry as industry standard tools will be used during the course.

Course Catalog Student Learning Outcome(s)

1. Demonstrate understanding of fundamental syntax and control structures - including variables, arithmetic statements, if statements and loops.

2. Explain and implement programmer-defined functions in C++
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Textbook(s) and Course Supplies

Text

Starting Out With C++. From Control Structures through Objects

Eighth Edition

By: Tony Graddis

ISBN-13: 978-0-13-257625-3

Note: Electronic version of this text sold by [amazon.com](https://www.amazon.com) is a 'smaller' version of the full text and is not appropriate for this course.

Communication Methods

- Blackboard Class Management Userid/Password
 - Blackboard Discussion Forums
 - Instructor's Web Site (<https://thekomanetskys.com>)
 - Course Videos hosted by Dropbox and linked to on Blackboard
 - Email
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Tools

- Blackboard Class Management Userid/Password
- Preferred: Eclipse Luna (Windows, Mac, Linux)
- Preferred: MinGW C/C++ Compiler (Windows, Mac, Linux)
- Code::Blocks (Windows)
- xCode (Mac)
- CodeWarrior (Mac)
- Libre Office or Open Office for Flowchart Development (all platforms). Omnigraffle, xDiagram can be used on Apple Macintosh Computers. eDiagram can also be used on Windows systems. All documents must be submitted for a grade as Adobe Acrobat formatted files.
- Dia (Graphical Program for Windows and Mac)
- Adobe Acrobat Reader v9 or above
- Apple Quicktime Player (for viewing videos)

Note: The above will be supplied on a DropBox link by the instructor. All of these tools are also available on the Lab computers (other than the Apple Mac components) at the college.

Course Requirements and Student Responsibilities

Attendance

Students will be required to attend all lectures. Students missing more than two lectures during the semester without prior instructor approval will have their final grade reduced by one grade point (ex: If the student achieves a B in the course, but misses 4 classes during the semester, their final grade will be a D). The instructor may also withdraw the student or failed them if they do not attend the required classes.

If you will be missing two or more classes, bring a note from a doctor or a family member (parent) explaining why you are missing the classes for possible exclusion from these classes.

Blackboard

Blackboard is a tool used by Las Positas College to assist in the management of course syllabi, assignments, materials and grading. The use, by the student, of Blackboard is mandatory. Students who do not use Blackboard will not obtain the class materials, assignments or tests necessary to complete the course. Any student not using Blackboard will be withdrawn from the course.

Withdrawal Dates

- Enrolled students that do not attend the first day of class will automatically be withdrawn from the course.
- If a student does not attend class two days in a row without prior authorization by the instructor, they will be withdrawn from the course.
- All withdrawal dates as established by the college can be found on the college's web site (<http://www.laspositascollege.edu/admissions/RegistrationDates.php>). It is the sole responsibility of the student's to know and comply with these dates.

Tests

All tests and quizzes will be announced one week in advanced using the Blackboard course management system being used at Las Positas College.

- Quizzes will be given at the end of each week of study and can be completed at home, open book. If more than 2 quiz's are missed, the student will either be withdrawn from the course automatically or be given a final grade of 'F'. Quiz's are due on the day specified, and late submissions will not be accepted.
- Mid Term Exam will be given on a date specified in Blackboard, classroom only, closed book. If missed, the student will either be withdrawn from the course automatically or be given a final grade of 'F'.

- Final Exam will be given on May 26th, 11:30-13:20 classroom only, closed book. If missed, the student will either be withdrawn from the course automatically or be given a final grade of 'F'.

Assignments/Projects

- All assignments will be announced and given using the Blackboard course management system being used at Las Positas College. Assignments submitted any other way will be ignored and no notice given to the student submitting them in this way.
- All assignments will be announced in class as well and described to the class at that time.
- Due dates for each assignment will be indicated in Blackboard.
- The grading of assignments will be done as described for those assignments in the Blackboard course management system. If the instructor says something about an assignment which is in conflict with what is indicated in Blackboard, the Blackboard description will take precedence.
- Assignments submitted via Blackboard will not be reset or cancelled. The assignment which is turned in is the assignment which will be graded. Please make absolutely sure that the assignment you submit is the correct one.
- Any student submitting an assignment after the due date will have that assignment graded at 1/2 the available points for 1 week after the due date. If the assignment is turned in more than 1 week late, the assignment will not be counted toward the student's final grade. So, if you turn in an assignment worth 40 points up to 7 days after the due date, the most points you can achieve will be 20.
- Final projects will not be accepted past the due date as specified in Blackboard.
- Assignments (other than programming projects) must be submitted using the Blackboard course management system. If an assignment requires written materials to be submitted for grading, the student can scan these into their computer and submit them through Blackboard, or they may turn in their hard copy assignment to the instructor indicating the following on the first page of the assignment:
 - Project ID/Name
 - Student Name
- If a student fails to submit two or more assignments for grading, the student will either be automatically withdrawn from the class, or, will be given a grade of 'F'.

Lab/Project Submission Requirements

During the course of the class, lab projects will be given and will need to be handed in to the instructor. To do this, the student must:

- Specify the following for each program submitted for a grade:
 - Project ID/Name
 - Student Name

- Date Completed
- Operating System Used for development
- IDE/Compiler Used for development

The student will submit the 'Source Code' for each project and not the executable files for the project. The student will submit all Lab/Project assignments via the Blackboard course management system. File types will include:

- C++ programs: Source code only - .cpp, .h and .hpp files.
- Flowcharts/documents: Adobe Acrobat files. Please see the Blackboard system for instructions on producing Adobe Acrobat files.

Note: DO NOT turn in IDE project files. This includes only settings for your project and not your actual project work.

Reading Lists/Assignments

- It will be the responsibility of the student to read the text material before that material is presented in class.
- Class materials which augment the text (ex: Powerpoint presentations) will be posted to the Blackboard class management system at least 48 hour before each class.

Student Participation in Class

- It is recommended and beneficial that students ask as many questions as possible during class to assure that their issues are handled in a way that will benefit all. Asking questions is not mandatory, but is a great way to better understand the presented materials.
- Students asking questions not applicable to the material being presented will be asked to better judge the time and place to ask such questions. If this behavior continues, said student will be asked to withdraw from the course.

Student Assistance Services

- If you believe you have need for special assistance in this class, you can visit the tutorial center in building 2400 to obtain this assistance.
- If you have special needs (physical or mental) such as needing a quiet place to work, special equipment to get your work done or the like, please notify administration in building 1600 and they will contact the instructor as to what is needed to assure you are successful in this class.

Classroom Behavior Policy

Academic Honesty

It is assumed that no student will copy the work of other students, use the answers of other students during quiz's, tests or exams, or have another student or outside individual do their classroom work for them. Any of these behaviors will not be tolerated. The student is enrolled in the course to benefit from the content presented, and any of these behaviors hinder these benefits.

Dishonesty will not be tolerated and if identified, said student will be withdrawn from the course or receive a failing grade immediately

Respect for the Learning Environment

- It is the responsibility of the student to turn off all communication devices which they bring into the classroom to assure they do not interrupt the presentation of the course. During breaks, these devices can be turned on and used but must be turned back off when class continues.
- Other than asking questions of the instructor, talking will not be tolerated as such behavior can interrupt the presentation of the course for other students.
- Usage of computers (whether provided by the college or personally owned computers brought into class by the student) is approved only for class work and not for personal use except during breaks during the class.

Students not showing respect for the learning environment will be consoled about their behavior one time. If the negative behavior continues, they will be withdrawn from the course immediately.

Grading Standards

Grading

Grades will be calculated based on a percentage model as shown below

Grade Ranges

A	100% - 90%
B	89% - 80%
C	79% - 70%
D	69% - 60%
F	Below 60%

Students Requesting a Higher Grade

Students requesting a higher grade at any time during the course may force the instructor to abandon any possibility of a slight curving of the grades for all students to assist those which find their grade close to the next higher letter grade. Grading of all materials is done fairly and the same for all students. Special considerations are not taken into account when grading.

Calculating Grades

During calculating the final grade for the course, .5 will be added to the average percentage grade possibly rounding 'up' the final grade.

The instructor may, at their discretion, adjust the percentages of each category of grade based on class and student needs.

Assignment Grading

Each assignment will be given a maximum number of points to be earned for that assignment. The total points for all assignments will be used to calculate a percentage of points achieved giving a grade for all assignments completed by a student. This Assignment grade will be one of three grades used to calculate the student's final grade.

Example:

- 10 Assignments given, each worth 10 Points = 100 total points
- Total points earned by the student = 85
- Percentage grade is: $(85/100)$ 85% resulting in a 'B' for Assignments.

The grading of assignments will be done as described for those assignments in the Blackboard course management system. If the instructor says something about an assignment which is in conflict with what is indicated in Blackboard, the Blackboard description will take precedence.

Details for each assignment will be documented in Blackboard. The assignment as found in Blackboard is what needs to be turned in and anything said in class by anyone (including the instructor) can be ignored. If the student becomes confused by what is in Blackboard and what has been said in the classroom, please notify the instructor via email so this confusion can be rectified.

At times, the instructor may ask a student to meet with them before, during or after class hours or during the instructor's published office hours to demonstrate their ability to accomplish what they have learned in class. This is done to assure that all students are learning what they need to learn while in class, that the student's are doing their own homework, and to assure that the instructor is teaching the class materials in a way which all students can easily understand.

Quiz Grading

Each Quiz will be given a maximum number of points to be earned for that Quiz. The total points for all Quiz's will be used to calculate a percentage of points achieved giving a grade for all Quiz's completed by a student. This Quiz grades will be one of three grades used to calculate the student's final grade.

Example:

- 10 Quizzes given, each worth 10 Points = 100 total points
- Total points earned by the student = 95
- Percentage grade is: $(95/100)$ 95% resulting in a 'A' for Quizzes.

A student missing two or more quizzes may be automatically withdrawn from the course or given a final grade of 'F'.

Mid-Term and Final Exam/Project

- The Mid-Term and final exams, combined, will be one of three grades used to calculate the student's final grade for the course
- The student will have a full class available to them for both the Mid-Term and Final Exams. If the student has a Final Project approved replacing their Final Exam, this project must be turned in before the end of the Final Exam class found in the Course Requirements and Student Responsibilities section of this document.

A student missing either the mid term or final exam may be automatically withdrawn from the course or given a final grade of 'F'.

Extra Credit Work

At times, the instructor may offer extra credit work which will allow the student to possibly increase their grade by earning a high grade on said extra credit work to help the overall earned percentage by the student.

If a student's extra credit assignment is graded at a lower grade than what their current overall grade is, that extra credit assignment will not negatively affect their grade.

If a student completes their extra credit work, but their base, required work is not correct, the extra credit work will not be counted toward their grade. The base assignment must be completed and done correctly to allow extra credit work to be counted toward the grade.

If the student has already received a perfect score on their assignment, then extra credit will not apply (you can never receive more than 100% on any assignment. However, the extra credit points received may allow the student to receive up to and include a 100% on an assignment which has extra credit available for it.

All extra credit work must be assigned by and approved by the instructor only.

Students found Cheating

If it has been found that a student has been cheating, then that student will automatically receive an 'F' for the course.

If a student is found giving their work to another student, this in itself is cheating and will be addressed in the same way.

Final Grades

If blackboard is being used to collect grades and communicate requirements to students, on the last day of instruction for the semester, the blackboard course will be placed 'off-line' to the student and grades will be calculated and sent to the Class-Web system which is the method used at LPC for reporting grades.

No final grades will be communicated to the student(s) in any other way and requests for such special treatment will be ignored.

Instructor Information

- The instructor for this course maintains a physical office at Las Positas College in building 2100 office 2155. Students are welcome to meet with the instructor at the indicated times found on blackboard to discuss details or issues of the class.
 - The best way to contact the instructor to discuss personal issues (such as illness or inability to attend a class) is via email.
 - The best way to discuss course content with the instructor is using the Blackboard class management system discussion forum's. The instructor will monitor these forums on a daily basis and answer any questions submitted. All students will have access to these discussion forums.
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Instructor Office Hours

Your instructor will have in-person office hours to assist students with any questions they may have or additional help in completing class assignments.

In-Person office hours can be found in the class information section of the blackboard class management system for the class.

Dates to Know

All dates applicable to this course can be found on the Las Positas web site at the following URL:

- <http://www.laspositascollege.edu/admissions/RegistrationDates.php>

Also, in the Blackboard Course information section for this course, a graphic of the fall semester schedule may also be found.

Exam dates can be found in the Course Requirements and Student Responsibilities/Test section of this document.

Schedule of Course Activities and Events

Course Content Presentation(s)

Course content will be presented to the student using Keynote/Powerpoint presentations which will be made available to the student using the Blackboard class management system. Course content shall follow the text used for the course.

- Week #1: Introduction to computers and computer programming
 - Chapter #1
- Week #2: Introduction to C++ and Problem Solving with the computer
 - Chapter #2
 - Flow-Charting Overview
- Week #3: Interactivity
 - Chapter #3
- Week #4: Decision making in C++
 - Chapter #4
- Week #5: Loops
 - Chapter #5
- Week #6: Files
 - Chapter #5 (continued)
- Week #7: Functions and Structured Programming
 - Chapter #6
- Week #8: Arrays, Sorting and Searching them
 - Chapter #7, #8
- Week #9: Pointers, Advanced Strings
 - Chapter #9, #10
 - Mid-Term Exam
- Week #10: Structured Data
 - Chapter #11
- Week #11: Include Files
- Week #12: Advanced File Operations
 - Chapter #12
- Week #13: Threads/C++ 11
 - How to do more than one thing at a time
 - C++ 11 Changes
- Week #14: TCP/IP Socket Programming
 - How to communicate using TCP/IP as the communication protocol

- or - Catch-Up
 - Week #15: Final Exam Preparation/Catch-Up Week
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Other Supplemental Information

Student Software

Software allowing students to accomplish home work and class projects will be made available using a DropBox link found on the blackboard class management system. This will give the student the flexibility to do their assignments and projects at home without having to come into the college. Contents of this DVD will include:

- Eclipse Luna IDE (Windows, Mac, Linux)
 - MinGW C/C++ Compiler (Windows, Mac, Linux)
 - Code::Blocks IDE (Windows)
 - Visual Studio Express 2013 (Windows)
 - VMWare Viewer (Windows)
 - Video tutorials showing the installation of all tools contained on the DVD
 - Libre Office
 - Dia
 - Others....
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Classroom Computers

All students shall have access to computers in the classroom which contain the necessary tools needed to complete all course assignments and projects required by the course.

Handouts/Teaching Materials

All teaching materials and handouts will be made available to the student on the Blackboard class management system in advance of any class.