

2014, Spring CS-1 Course Syllabus

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.

Textbook(s) and Course Supplies

Text

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

Seventh Edition

By: Tony Graddis

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

Note: Electronic version of this text sold by 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
- Email

Tools

- Blackboard Class Management Userid/Password
- Preferred: Eclipse Kepler (Windows, Mac, Linux)
- Preferred: MinGW C/C++ Compiler (Windows, Mac, Linux)
- Code::Blocks (Windows)
- xCode (Mac)

- CodeWarrior (Mac)

Note: All of the above will be supplied on a DVD 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 three 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 missed 4 classes during the semester, their final grade will be a C).

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 (as of 2014/01/20 that web site is <http://www.laspositascollege.edu/admissions/RegistrationDates.php>)

Tests

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

- Mid Term Exam will be given on 3/17/2014
- Final Exam will be given (or approved project handed in) will be given on 5/28/2014

Assignments

- All assignments will be announced and given using the Blackboard course management system being used at Las Positas College.
- All assignments will be announced in class as well and described to the class at that time.
- Due dates will be indicated in Blackboard.
- Any student submitting an assignment after the due date will have that ~~assigned~~ ~~graded one level below the earned grade~~ assignment graded at 1/2 the available points. So, if you turn in an assignment worth 40 points late, the most points you can achieve will be 20.
- Assignments (other than programming projects) can 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

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 can submit these to the instructor in the following ways:

- Email
- Memory Stick
- CD/DVD Media
- Note: No print-outs of source code will be accepted for any projects completed

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.

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 immediately

Respect for the Learning Environment

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- 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%

Assignment/Quiz Grading

Each assignment or Quiz will be given a maximum number of points to be earned for that assignment or Quiz. The total points for all assignments and Quizzes will be used to calculate a percentage of points achieved giving a grade for all assignments and Quizzes completed by a student. This Assignment/Quiz grade will be one of three grades used to calculate the student's final grade being worth 1/3 of the final grade.

Example:

- 10 Quizzes/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/Quizzes.

Mid-Term and Final Exam/Project

- The Mid-Term exam will count towards 1/3 of the student's final grade for the course
- The Final Exam or approved Project will count towards 1/3 of 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

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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.

Extra Credit Work

If a student would like extra credit work assigned to them during the course, they must request and have approved such extra credit work by the instructor of the course. The student is responsible for suggesting extra credit projects to the instructor and then have that project approved by said instructor. At times the instructor may make extra credit projects available to all students by announcing these projects on the Blackboard class management system used in the class.

Instructor Information

- The instructor for this course does not maintain a physical office at Las Positas College, but normally remains in the classroom where the course is taught at least an hour after class has adjourned. Students are welcome to meet with the instructor at that time 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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Dates to Know

All dates applicable to this course can be found on the Las Positas web site at the following URL (as of 01/20/2014)

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

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
- Week #3: Interactivity
 - Chapter #3
- Week #4: Decision making in C++
 - Chapter #4
- Week #5: Loops
 - Chapter #5

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- 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: Advanced File Operations
 - Chapter #12
 - Week #12: Threads
 - How to do more than one thing at a time
 - Week #13: TCP/IP Socket Programming
 - How to communicate using TCP/IP as the communication protocol
 - or - Catch-Up
 - Week #14: Database Processing with C++
 - Programming with MySQL
 - or - Catch-Up
 - Week #15: Final Exam Preparation/Catch-Up Week
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Other Supplemental Information

Student DVD

A student DVD will be supplied to all enrolled students which will contain all necessary development tools necessary to complete all course assignments and projects on the student's personal computer(s). 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 Kepler 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

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.