

COURSE SYLLABUS (Distance Learning Edition)

Computer Programming 3 - 6

Tamalpais Union High School District

Redwood High School

Larkspur, California

August 19, 2020

Instructor / Classroom Info

Instructor: Dave Goldsmith (dave@redwood.org and DaveGoldsmith.com)
Lab 279 (Windows 10 Professional Computer Lab) and Office 277 (945-3639)
Online Learning Management System: Canvas

Course Objective

These one-semester courses are continuations in the series of computer programming courses, and may be taken multiple times for credit. In these classes you will learn how to write computer programs using more advanced computer programming languages and APIs, such as Visual Basic, C++, Java, Python, C# with XNA, OpenGL, DirectX, PHP, MySQL, Minecraft, and/or others, depending on availability and your interests. In addition to learning the syntax of these computer languages and how to write computer programs with them, you will also continue to learn good programming techniques and coding styles. Logic and problem-solving skills will be heavily emphasized, as these are primarily self-paced courses in which you must be able to work independently (by yourself or in small groups) at your own speed. The computer programming skills you learn in these courses are transferable to all programming languages and computers. Having already completed Programming 1-2, you are now eligible to take Advanced Placement Computer Programming this year or at a later time.

Required Course Materials

Notebook (with lined paper), pencils/pens/erasers

Note: There is no required textbook for this course, although extensive online materials and information are available

Online Class Rules and Procedures

Maintain a reliable and sufficiently speedy Internet connection. (See note below.)

Use a desktop or laptop computer (not a phone or tablet) to connect to our online classes. (See note below.)

Make sure your computer camera is working and turned on at all times, except when told otherwise by the instructor. (See note below.)

Make sure your computer microphone is working at all times and (possibly) muted when you are not speaking. (See note below.)

Use headphones or earbuds, instead of speakers, if audio echo/feedback is a problem. (See note below.)

Your display name must consist of only your first and last name.

Do not sit or lie on a bed.

Wear school-appropriate clothes. No pajamas, hats, caps, hoods, or dark glasses.

Do not use a virtual background, and make sure everything visible through your camera is appropriate for an online class.

Be in a quiet location that will remain free of disruptions and distractions.

Phones, watches, and all other electronics must be nowhere near you.

Do not eat, chew gum, or listen to music.

Due to privacy and legal issues, you should never record any of our online classes.

Unless given permission by the instructor, do not use the live online chat system.

Share your screen only with instructor permission, and make sure everything you display is appropriate and directly related to our class.

Note: If any of these arrangements are a problem, let me know right away so that we can discuss your situation and figure out a way to resolve the problem.

Tests and Quizzes

Due to the nature of these courses (mostly independent, student-specific work), tests and quizzes will probably not be given. I reserve the right, though, to give a test or a quiz at any time, with or without advance notice, and have it count for any number of points and/or any percentage of your overall course grade.

Assignments/Projects

Throughout the semester you will be given anywhere from one to several assignments or projects. This may consist of coding to be completed individually, or larger group programs. This work usually can be completed during the online class periods, but depending on circumstances may require additional time outside of class. Depending on the language(s) being used and the types of assignments/projects, this work will probably take long periods of time (many weeks or months) to finish.

In addition to your coding assignments/projects, every week you will need to submit a progress report detailing what you have accomplished since your last report.

Homework

Homework will rarely be assigned. You may find, however, that you need to spend time outside of the online class periods working on your assigned computer programs in order to complete them in a satisfactory manner by the given due date.

Late Assignments

For each assignment or group of assignments, a rough due date will most likely be given. If this is the case, then work that is turned in well after that approximate due date will still be accepted, but possibly for reduced credit.

Extra Credit Work

There really is no reason to have extra credit work for these courses. As long as you check in (twice...see below) for every class period, are using class time for coding, and complete your programming projects on time (or at least make a gallant effort to do so), your overall grade in the class should be quite respectable.

Absences and Make-up Work

Unlike last spring, the state is now requiring that accurate attendance be taken every day for all online classes. This will be done via eSchoolPlus. You are expected to be present for this online class every day. Due to the nature of these courses, for most of the class periods I will probably have you check in with me at the start of each class, then work independently (offline) on your computer program(s), and then return to the class to check in with me near the end of the period. Should you happen to be absent on a day when an assignment or project is due, you should turn in the work on the day that you return to class. Since assessments will probably not be given, making up quizzes and tests should not be an issue for these courses. However, if you are absent for an extended period of time, upon your return to class you should talk with me about how you can make up the coding time that you have missed.

Tardies and Absences

To avoid spending class time taking attendance, I will generally try to take roll during the online "passing period" and then click the "Save" button in eSchoolPlus right at the start time of each class period. This means that you must join our online classes before the start time of each period; if you have not joined an online class by the start time, you may be marked absent. However, if you are late to class, but arrive within the first ten minutes of the period, and notify me immediately upon your arrival, and then remind me at the end of the class period (or when I have a free moment), your absence will be changed to a tardy. Keep in mind that your overall course grade may be affected by excessive tardies and absences. Also, we've been told that excessive absences may trigger a response from the Redwood administration.

Cheating

If you cheat on a test, quiz, or assignment, you will receive zero points for that work, an administrative disciplinary referral will be issued, and your parents/guardians will be notified. If you engage in (non-cheating) inappropriate conduct during a test or quiz, you may receive reduced credit or no credit for that assessment. In both cases (cheating and misbehaving), additional disciplinary action may also be taken, which can include the loss of even more points and/or the lowering of your overall course grade. Note that submitting a coding project that is not entirely your own is considered cheating. If you are ever in doubt about whether a particular action is considered cheating, check with me first. If you need extra help, see me in advance of any upcoming quiz, test, or assignment due date. For additional information, see the separate distance learning "No-Cheating" contract that you and a parent/guardian are required to sign.

Extra Help

I will be available to provide extra help for students during the 75-minute "Mandatory Support" periods on Tuesdays and Thursdays. During those times I will be online so that you can share your computer screen with me. Note that those two periods are the only times that I am guaranteed to be available for extra support, so unless I indicate otherwise, you should assume that I will not be available to provide extra help on any other days or at any other times. You can, of course, always email me (dave@redwood.org) for additional support, but for most coding-related questions you will need to wait until one of the above time periods so that we can both be online and I can view your screen and help you edit your computer code. Remember, if you are having difficulty understanding a concept, it is your responsibility to seek help.

Grading Policy

Since these courses consist mainly of independent, student-specific work, your marking period and semester grades will be based on periodic check-ins made by me, and regular progress reports submitted by you. Also, at the end of each semester (and perhaps other, mutually agreed upon times), your longer-term projects will be graded for completeness (based on predetermined specifications), functionality, user interfaces, and errors. In addition, you will most likely be required to present your projects to the other students in your online class period. While the grading of your projects is largely subjective, as long as you are coding during the vast majority of every class period and are diligently working toward your stated goals (which will be outlined in a document that you will prepare and submit at the beginning of the semester), you should be able to earn a high grade for the course.

Letter grades will generally be assigned as follows:

Below 100% down to 95% → "A"
Below 95% down to 90% → "A-"

Below 90% down to 80% → "B" range
Below 80% down to 70% → "C" range

Below 70% down to 60% → "D" range
Below 60% → "F" (failing)

Course Content

The following are general topics that may be covered in this one-semester course:

Programming Language Syntax
Programming Concepts & Style
Decision Structures
Data Storage
Numeric & String Variables
Sorting Algorithms
Random Numbers
Error Handling
Object-Oriented Programming
Problem Definition & Design
Packages
Methods
Instantiation
Searching Algorithms

Variable Initialization
Modular Programming
Loop structures
Data Types
Global & Local Variables
Input & Output
Arrays
Graphics
Attributes & Behaviors
Testing & Debugging
Classes
Constructors
Recursion
Big-O Notation

Notes

I reserve the right to amend the policies, rules, and procedures outlined in this syllabus at any time, without any advance notice. I also reserve the right to change, at any time, the point value of any test, quiz, or assignment. In addition, at my discretion, and without any advance notice, I reserve the right to raise or lower your overall course grade based on your online class conduct and participation.

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Instructor: Dave Goldsmith

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Date: August 19, 2020

I have read the preceding rules, procedures, and policies contained in this course syllabus and understand and will abide by them.

Student Signature

Parent/Guardian Signature

Student Name (please **PRINT**): _____