



CS 2433: C/C++ Programming, Online Course, Course Syllabus, 2019 Spring Semester, <https://online.okstate.edu>

Lecture Hours

None. This is an online course. However, there will be three exams (two mid-terms and final), and the final must be taken in a proctored environment.

Instructor Information:

Richard L. Churchill,

Office: NOC Building, room 442. The NOC Building is North of the Monroe Street parking garage.

Phone: 405-334-7674

NOTE: I do not respond to text messages, as use of text messages violates FERPA restrictions on privacy and security. Use email if you need me to read something. Also, only call me if it is important, as email is the preferred form of communication: it allows me to budget my time across 150+ students better.

E-Mail Address: richard.l.churchill@okstate.edu

Office Hours: Tuesdays and Thursdays, 2:30 to 5:00 PM.

T.A. Information:

There is no T.A. assigned for this course.

Course description

C and C++ programming language types, operators, expressions, control flow, functions, structures, pointers, arrays, UNIX interface. Basic object-oriented programming using C++ and the related language syntax and functionality.

Course objectives

By the end of the course, all students should be able to

- write good C and C++ code,
- use good programming style when writing code,
- design programming solutions to problems.
- acquire a basic understanding of algorithm performance issues.

Course Prerequisites

CS 1113: Computer Programming I or equivalent.

Course Website

You can access the Canvas site for this course directly via the link <https://canvas.okstate.edu> or at my.okstate.edu then use the link to Canvas on that page. You will need to log in using your OSU email address and password.



All course materials except the online textbook and its related material plus the department's csx server, will be available on the course Canvas site and email.

Textbooks

1) <https://zybooks.zyante.com/>

To register for the ZyBooks online course material, complete the following steps.

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: OKSTATECS2433ChurchillFall2019
3. Subscribe

A subscription is **\$58**. Students may begin subscribing on Jan 4, 2018 and the cutoff to subscribe is Apr 28, 2019. Subscriptions will last until May 28, 2019.

- 2) The C Programming Language, Second Edition, by Kernigan and Ritchie, is optional but **very** highly recommended. This book was written by the developers of C, and is perhaps the best text on any programming language ever written.
- 3) Absolute C++, by Walter Savitch, sixth edition. This is also optional but recommended. The 4th or 5th editions are okay.
- 4) For the more masochistic but determined students, the following may be of interest, as they are “exhaustive” references.
 - C Primer Plus, Sixth Edition, Stephen Prata.
 - C++ Primer Plus, Sixth Edition, Stephen Prata.

If you wish to purchase any of the optional texts, I suggest using addall.com. This site searches over 30 online book retailers and lists all sites selling the book in question by price, with links to the retailer sites and item pages. I have no business affiliation with addall.com other than as a customer, so I am not trying to sell you anything, other than the idea that you can get books for less than you think, if you know where and how to look.

Also, The C Programming Language, Second Edition, often simply referred to as “K and R”, can be found on the desks or on a handy shelf of many of the best programmers in the industry. It contains many excellent examples of well-written functions and programs. It remains in print over 30 after it was first published.

Assignments

Zybooks Activities	30%
Programming Assignments (12 to 14) Note: Not all assignments have the same weight. Later assignments have slightly more weight.	40%
Exams (3)	10% each

Programming assignments are the largest single component of your final grade for this course. The reason is simple: you learn a programming language best by using it. These assignments are intended to be progressive in content. Later assignments build upon the second in a manner leading to a single program that illustrates the development of a reasonably powerful and versatile program. **Successive steps will be relatively simple.** Be sure you solve each successive assignment's problem in a way that supports further development based upon work to that point, but you should be willing to re-write some or all if you find better ways to satisfy assignment requirements.



Exams

The first mid-term will be on September 27, the second mid-term on November 8, and the final exam on December 13. For students in the Stillwater area, these will all be proctored on campus. If you cannot attend that session, you will need to arrange proctoring for these. Information about proctoring will be posted to Canvas.

Evaluation

Your grade will depend solely on your effort in earning the required points, with grades assigned on the following scale.

A: $\geq 90\%$, B: $\geq 80\%$, C: $\geq 70\%$, D: $\geq 60\%$, F: $< 60\%$

Student Expectations

To do well in the class, students are expected to

- Keep up with the ZyBooks material, including the programming tasks,
- Read or view the instructional material posted to D2L each week,
 - Note that this material will be relevant to the weekly programming assignment. Expect two instructional documents minimum per week. Again, successive steps in the development of your programming project will be relatively simple.
- Make suitable arrangements for proctoring of your mid-term and final exams,
- Ask for help if any of the material covered in class is not clear,
- Complete the programming assignments and submit them before their deadlines,
- Regularly check e-mails and course website for announcements.

Academic Workload Policy: This is a programming-intensive class and students are expected to spend about 6 to 9 hours per week to understand the material and do the work. In terms of overall hours for the course over the semester, this is the amount of time traditionally expected of students for college level courses.

E-mail Policy: E-mail is the preferred communication medium. Please add “CS 2433” to the subject line for all e-mail communications. Note that even email takes some time. Send queries and notifications of problems early, so they can be addressed in a timely manner.

Computer Policy: Students are expected to have free access to or to own a Windows PC or Apple Mac of sufficient power to support the work required for this course. For students in or near Stillwater, the computers in MSCS 108 are suitable for this purpose, but you should both have a flash drive and know how to access your personal OSU drive to ensure you preserve your own work files.

Attendance Policy: This is an online course, so attendance is **not** required. But, you should check the course Canvas site daily.

Penalties for late work: 20% penalty of available points per day late. For example, if the assignment was worth 25 points and you received 18 points base score and submitted one day



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late, your final grade for the homework is 13 points. A single second late counts as a day, as a day and a second counts as two, etc. However, you cannot receive negative points for an assignment. No make-up exams will be scheduled except in extreme cases. If you are going to miss an exam or assignment, contact the instructor in advance. Exceptions can be made if a serious family or personal emergency arises. If you require special accommodations under Student Disability Services rules, be sure to notify the instructor and remind him prior to each exam.

Grade questions: If you have any questions regarding the grading of your programming assignments or exams, you must contact the instructor within **ONE week** after the date the deliverable was graded and posted on the course website.

Extra Credit: There might be some extra credit problems for some assignments. The extra credit problems will be at least as hard as the assignments, and will be available to all students.

Incomplete: An Incomplete will not be given, except if a serious family or personal emergency arises and at least 50 percent of the course work has been completed. A written excuse with a legitimately verifiable reason must be provided in order to receive an Incomplete.

Academic Dishonesty: Scholastic conduct must be acceptable, that is, students are expected to do their own work. Discussion of homework assignments is encouraged, but students must work independently on their program submissions. Sharing of code is strictly forbidden. Violations of academic integrity rules will result in significant punishments, from a score of 0 on the violating assignment up to and including a final course grade of an F! (F-shriek, indicating an academic integrity violation on your permanent transcript).

Additional Important Information

The course requires that you access the CS departments csx server. If you are not accessing this server from the OSU network, you will need to use Virtual Private Network (VPN) software available through the CS department Web site at <http://cs.okstate.edu/loggingon.html>. If you have problems accessing the server using the VPN software, contact the department's technical support via <http://cs.okstate.edu/techsupport.html>. Note also the reference to PuTTY as a useful tool for accessing the server, and that an FTP utility (such as Core FTP Lite) can also be useful.

The typical development cycle is to edit source files on your computer, then log onto csx using PuTTY and an FTP program, uploading the source to csx using the FTP software, compile the source via PuTTY, then performing any edits locally, re-uploading and recompiling until the code compiles correctly, then debugging on csx (using local edits as uploads as before) until the program is correct.

If you have problems obtaining or using any of the tools needed, contact the department system admins or the instructor.

An additional useful tool is jEdit (<http://jedit.org/index.php?page=download>), a powerful text editor that supports code development for most programming languages.



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Finally, due to Internet and server issues being a recurring problem for anyone dependent upon the Web for an online course, it can be useful to have a back-up development environment. As an OSU student, you are entitled to download and install a copy of Microsoft's Visual Studio .NET for C++ from the OSU IT department's software distribution site. While having a copy is potentially of considerable benefit, Microsoft does not always comply with all the standards they claim to. There may be problems developing code that works correctly in both the Windows and on csx when using Visual C++ as your development environment. An alternative with lower risk is the Bloodshed Dev-C++ Integrated Development Environment (IDE)(<http://www.bloodshed.net/devcpp.html>), which includes a C/C++ compiler more compatible with the Linux environment. Using this IDE when there are network problems may save you time and some risk of late submissions. If you experience problems downloading this too, inform the instructor so he can provide installation tools.



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School holidays, exam dates and finals week are shown below. The first three assignments are show, but subsequent assignments will be posted with varying due dates according to the progress of the class and the difficulty of the individual assignments. All programs will be due on Saturdays, at 11:49 PM, unless otherwise stated in the assignment. Final grades must be posted to the registrar on the date shown.

	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Week
August	18	19	20	21	22	23	24	1
		Start					prog0	
	25	26	27	28	29	30	31	2
September	1	2	3	4	5	6	7	3
		Holiday					prog2	
	8	9	10	11	12	13	14	4
	15	16	17	18	19	20	21	5
	22	23	24	25	26	27	28	6
						MT1		
	29	30	1	2	3	4	5	7
	October	6	7	8	9	10	11	12
13		14	15	16	17	18	19	9
20		21	22	23	24	25	26	10
						Fall Break		
27		28	29	30	31	1	2	11
November	3	4	5	6	7	8	9	12
						MT2		
	10	11	12	13	14	15	16	13
	17	18	19	20	21	22	23	14
	24	25	26	27	28	29	30	15
				Thanksgiving Break				
December	1	2	3	4	5	6	7	16
	8	9	10	11	12	13	14	17
		Finals Week					Final	
	15	16	17	18	19	20	21	
				Grades				



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