CS1428: HL1
Fall 2020
Tuesday 12:30am-1:50pm CT

Instructor: Gentry Atkinson
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Office Hours: Tuesday and Thursday 10:30-12:30 through Zoom
Tuesday Meeting ID: 182 148 279
Thursday Meeting ID: 580 125 644
Class Meeting ID: 971 8401 9024
Class Pass Code: bubbleSort

Course Description
Introductory course for computer science majors, minors and others desiring technical introduction to computer science. Contains overview of history and structure of the digital computer, including binary data representation. Problem solving, algorithm development, structured programming, good coding style, and control structures of C++ are emphasized.

Prerequisites
[MATH 1315 or MATH 1317 or MATH 1319 or MATH 1329 or MATH 2417 or MATH 2471 with a grade of "C" or better] or [ACT Mathematics score of 24 or better] or [SAT Mathematics score of 520 or better] or [SAT Math Section score of 550 or better]

Students are not expected to have any experience with coding but a familiarity with computer use is necessary. Students should familiarize themselves with the Canvas environment before the start of the first lab.

Learning Objectives
During this class students will:
- construct simple C++ programs.
- apply concepts presented in their CS1428 lectures.
- understand program flow and control.
- learn the broad concepts of computer science.
- apply simple parallelism.
- gain an understanding of algorithmic efficiency and complexity.
- explore the common tools of computer science students.

Schedule

Lab Number	Lab Meeting	Topic
0	September 1	Introduction
1	September 8	Expressions and I/O
2	September 15	Branching
3	September 22	Loops
4	September 29	Arrays and Vectors
5	October 6	Functions
6	October 13	Linux Command Line
7	October 20	Structs
8	October 27	Searching and Sorting
9	November 3	Algorithmic Complexity
10	November 10	Parallelism
11	November 17	Green Computing
	November 24	Break for Thanksgiving
12	December 1	Peek at Python

Required Materials

There is no required text book for the lab section of CS1428. Weekly readings will be provided though Canvas.

Students should have access to a computer that is capable of running Code:Blocks or a similar IDE, Zoom, and a web browser which can load Canvas.

Grading

Students will not receive a separate grade for their lab section in CS1428. Their final grade is sent to their lecturing professor and is counted as 10% of the grade for that class.

Every week of class will have 100 points worth of work due: a 30 point prelab assignment, a 60 point lab assignment, and a 10 point participation grade. Students can earn their participation grade by either attending the class meeting to check in for attendance through Canvas or posting a *meaningful* question or response on the Discussion board. Students do not need to be present for the whole class meeting but must be in Zoom at the start of class for the attendance check.

Participation

Students are not required to attend the weekly lab meetings but are encouraged to do so. Real-time interaction with an instructor is a valuable opportunity for early coders. Students who choose not to participate in the Zoom lab meetings can still participate in the Canvas Discussion boards.

Students can receive credit for participating in class either through the Zoom meetings by being present during the attendance check or through the Canvas Discussion boards. Participation through the Discussion board could be either posting a *meaningful* question about the week's assignment or by posting a *helpful* response to another student's question. Repeating a question that has already been asked will not count as participation. Likewise, responding to another students question in a non-helpful way (e.g. "I don't know") will not count.

Class Meetings

A weekly Zoom meeting will be available to all students during the scheduled lab hours (Tuesday 12:30-1:50). The meetings will begin with an attendance check followed by a short (~5 minute) mini-lecture on the week's material and common problems encountered by students. After that time student's will work on their own and can ask for help from the instructor as necessary.

Students should post questions in the chat so that the instructors can respond in a timely and fair fashion.

Late Work

Timely work is important to avoid getting too far behind the lecture section. Late work will not be accepted for the participation or pre-lab portions of the student's grade. Students can submit lab assignments up to 24 hours late for a 20 point deduction.

Email and Discussion Responses

Students can expect responses to emails and Discussion board posts within 24 hours for communications sent on Monday-Thursday or 48 hours for communications sent on Friday-Sunday.

Civil Communication

The same standards of conduct should be maintained during online classes that are during face-to-face classes. Communications that are offensive, graphic, or bullying will be removed immediately from the Discussion board and will not count towards a participation grade. Students that are communicating in an unprofessional manner will receive on warning during Zoom meetings. Students who share material or links to material or use language that is graphic, offensive, or disturbing will be removed from the Zoom without warning and will have their conduct reported to the lecturing professor.

Office Hours

Students who would like extra instruction or who wish to discuss the concepts presented in labs are encouraged to attend office hours on Zoom on Tuesdays and Thursday from between 10:30am and 12:30pm CT. These hours are first-come-first-serve and students who appear close to the end of the session my not have their questions addressed.

Students who cannot attend office hours due to schedule conflicts can email to set up a private Zoom meeting subject to instructor availability.

Accommodations

Students with an ADA disability or who require special accommodations (e.g. extra time on assignments or a reader) should register with the Office of Disability Services. Students do not need to discuss their disability with their instructor. The Office of Disability Services will arrange an appropriate accommodation plan.

Honesty

Students are expected to comply with the Honor Code of Texas State University. Discussion is encouraged during lab hours and on the Canvas discussion boards but no student should submit another person's work as their own. Sharing files or copying code is not permitted in any circumstance. Submitted assignments which are determined by the instructor to not have been authored by the submitting student will be graded as a 0 and the professor of the student's lecture section will be notified.