

Fall 2022 – CSC 1810 Sections 1 and 2

Professor: Perry Kivolowitz
Office: Straz 090 - All 1:1 contact by Internet
Office Hours: Almost anytime Day or Night – just make an appointment when it is convenient for you (and I). To make an appointment, consult my Google Calendar. Instructions below. All contact by zoom.
Contact Info: pkivolowitz@carthage.edu
Meetings: Section 1 meets MWF 10:30 to 11:35 Clausen 114
Section 2 meets MWF 13:35 to 14:40 Clausen 114
Text: Online Book – Programming in C++ see the instructions below

Principles of Computer Science I – Destination Check

This course is for intended CS majors and minors. Our course CSC 1100 is more appropriate for people who *know* they are going to take one and only one CS course. If this is you, consider CSC 1100 if your major or minor permits.

COVID related requirements

I *may* insist on the wearing of masks in class.
I *may* not do face-to-face office hours as technological alternatives exist.
See below: My office hours.

Computer Science – I love it – I hope you will too!

From the age of 13 (in 1974) I was totally, completely, and irrevocably hooked. It has been a wild, challenging and rewarding ride for me. When I sat in your chair, I had no idea I'd have a career at the leading edge of motion picture visual effects. I had no idea I'd win an Academy Award (and my software win a second) or two Emmy Awards. I had no idea I'd start five businesses. I had no idea I'd...

This concept of "I had no idea I'd..." is a great advantage of CS. Ask yourself, what field doesn't have an underpinning in computers? Suppose you have a passion for, well, anything – you can combine it with Computer Science!

I know I'm biased – CS is the best major there is! I hope you'll think so too.

C- or Better

You must achieve a C- or better to go on to the next course in our introductory sequence.

Only you are responsible for your grade.

Expectations Will Be High!

Researchers are commenting that as Professors have lowered standards for the pandemic, student performance has dropped to match. Even with the return to in-person instruction, student performance has remained low.

I have seen this myself. In Academic Year 2021 / 2022 my grading and attendance standards were as low as they have ever been.

In order to do right by you, my standards must return to pre-pandemic level. To wit:

- For every five classes missed, a full letter grade will be deducted from your final grade.
- All assigned readings are due when specified. No late readings will be scored.
- All projects permit one late day. No work will be accepted after one day after due date.

At the End of This Course, You Will Be Able To...

You will have a platform on which to build future learning. At the end of this course:

- you will have gained broad exposure to C and C++.
- you will master *selection, looping, procedural organization (functions)*
- you will be familiar with *structs and classes*.
- you will have used more than half of the 62 *keywords* in the language (keywords not discussed in this course are shown in *italics* with ~~strike through~~):

| | | | |
|----------|-------------------|---------------------|---------------------|
| auto | double | int | struct |
| break | else | long | switch |
| case | enum | register | typedef |
| char | extern | return | union |
| const | float | short | unsigned |
| continue | for | signed | void |
| default | goto | sizeof | volatile |
| do | if | static | while |

| | | | |
|-------------------|---------------------|------------------|-------------------------|
| <i>asm</i> | <i>dynamic_cast</i> | namespace | <i>reinterpret_cast</i> |
| bool | <i>explicit</i> | <i>new</i> | <i>static_cast</i> |
| <i>catch</i> | false | <i>operator</i> | <i>template</i> |
| class | <i>friend</i> | private | <i>this</i> |
| <i>const_cast</i> | <i>inline</i> | public | <i>throw</i> |
| <i>delete</i> | <i>mutable</i> | <i>protected</i> | true |
| <i>try</i> | <i>typeid</i> | <i>typename</i> | using |
| using | <i>virtual</i> | <i>wchar_t</i> | |

Other “high concepts” that you will work towards include:

- Thinking algorithmically
- Recognizing and appreciating certain immutable laws in the CS universe such as the constant never-ending struggle between time and space. *Yes, really.*

Tutors

Our class has a one tutor per section:

- Joey Sachtleben jsachtleben@carthage.edu
- Austin Fischer afischer1@carthage.edu

A comment about equity and inclusion

I completely subscribe and agree with the Carthage statements on equity and inclusion. See them here: <https://www.carthage.edu/equity-inclusion/mission-statement/>

This is a NO BRO ZONE

Computer Science as a field began largely based on the contributions of women. Since then, female involvement in CS has dropped. This is a Bad Thing. It is our common obligation to reverse the trend. Recognizing and acknowledging that a “brogrammer culture” exists in the tech-industry is the first step.

Often an action that excludes or diminishes others is done without awareness. If you see or hear something, say something right then in the moment. It can be polite. It can be gentle. But say something.

We’re all colleagues here and constructive feedback should always be a Good Thing.

The future requires the best of all of us.

Practice, Practice, Practice

You cannot succeed in Computer Science without practice.

CS is no different from any endeavor in which you seek excellence. What you do **outside** the classroom strongly indicates your success in a CS career.

If you don't practice your sport, the consequences are immediate - you don't play. Oh well.

If you don't practice CS, the consequences are delayed until final grade time.

By then it is too late to correct. The damage is worse than having to sit out a game. Keep in mind that a low grade (D+ or lower) will prevent you from advancing to the next course in our introductory sequence. If CS is to be your major or minor, this can be a big, big deal.

Consider these questions:

- Are you likely to put food on your family's table with your optional activities?
- Does the sport you play have a nice retirement plan? Drug plan? Vision?
- Will League of Legends pay for your kid's orthodontia?

Platform

I have a [video series](#) and documents explaining how to install a development environment locally on your own computer. These will be described in the class web site.

Accessing Schoology

You are required to be up to date on any announcements or postings on our class learning management system whether said announcement is made in class or not.

Class Recordings

Class sessions *are not likely* to be recorded.

If they are, you are implicitly agreeing to be recorded by attending my class. If this is not acceptable, please switch to another instructor.

Accessing the Class Text

The text is an online service hosted at zyBooks.com. Of note is that being online, it offers live exercises within the "book" that give immediate feedback. **These exercises are graded.** Not doing these is like tossing your grade in the trash.

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: CARTHAGECSC1810KivolowitzFall2022
3. Subscribe

Note: this is **REQUIRED**.

Reading ahead

Feel free to read ahead. We will cover some or all of chapters 1 through 6 and 9. Additionally, some of chapter 15 will be covered. See the [syllabus](#) for more detail.

Note: I will cover material in a different order than the book. My ordering makes sense for teaching. Their order makes sense for writing a book. Do not consider my “jumping around” as a sign of poor teaching. Instead, it is a sign of excellent teaching. If I do say so myself.

Class Rhythm

In general, we will follow this pattern:

| | |
|-----------|--|
| Monday | Review. zyBook homework questions, if any, assigned. Any zyBook readings are due. Projects that are due the following week are (explained and) assigned. Projects assigned the week before are due by end of this day (11:59 PM). New material. |
| Wednesday | Review. zyBook homework questions, if any, assigned. New material. |
| Friday | Review. zyBook homework questions, if any, assigned. New material / Project work time. |

Attendance Policy

Miss class at your peril. You are expected to attend every class in its entirety. If you must miss class:

1. Be sure you connect with someone who was there for notes and discussion.
2. Let me know in advance.

For every five classes missed, your final grade will be reduced by a full letter. Absences due to sports, music, or any other campus activity count as an unexcused absence. To be clear: A full letter grade means exactly that. For example, a B+ will be reduced to a C+.

We meet for 65 minutes. There is little room to “leave early.” Therefore, leaving a class early will be counted as a half class missed.

We meet for 65 minutes. There is little room to “arrive late.” Therefore, arriving late to a class will be counted as a half class missed.

Illness and family crises count as *excused* absences but *might* require evidence.

Course components / grading

I stress these can change as I adapt to class needs.

| <i>Component</i> | <i>Weight</i> |
|-------------------------|---------------|
| Final exam | 10 |
| Programming Assignments | 60 |
| Zybooks exercises | 30 |

Quizzes might be given. They are not graded. Consider these to be practice.

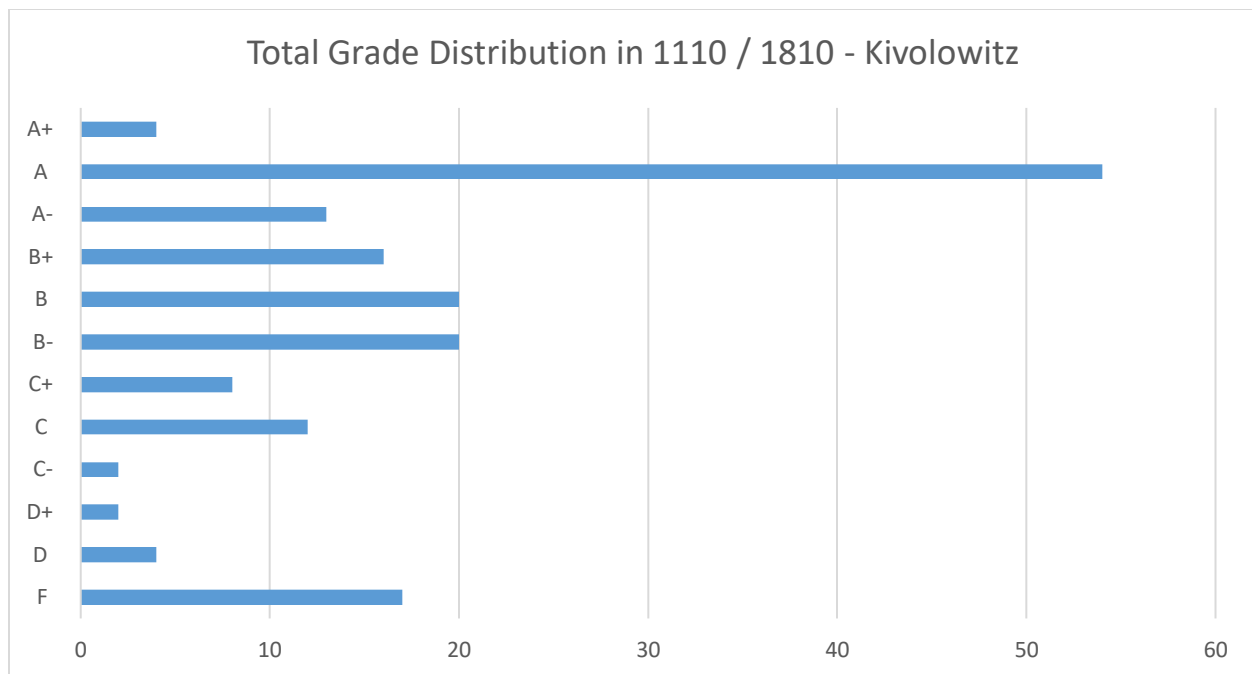
Each assignment is graded on a numeric scale without curve. Your final grades *may* be curved modestly at the end of the course. Typically, *if* I apply a curve, raw composite grades are raised to the power of 0.8.

BEING AN EXPONENTIAL BOOST, STUDENTS AT THE TOP AND BOTTOM WILL BE HELPED THE LEAST.

Any differences between your final grade and that which you see on the LMS will be zero to positive – that is, your final grade will be the same or higher than what you see on Schoology, never lower.

Tough Grader?

In the spirit of full disclosure, here is a distribution of all the grades I have thus far assigned in this class and its predecessor 1110 from Fall 2015 to Fall 2020. The total number of grades is 174. The mean is 2.9. The mode is 'A'.



Programming Assignments

Several programming assignments will be assigned. Unless otherwise arranged, each will be due in one week. Projects may be turned in one day late with no penalty. Programming assignments will be graded on a 100-point scale. No curve is applied to project grades.

Projects have specifications. **Read specifications immediately. If anything in a specification is unclear, ask for resolution immediately.** I prefer this sort of question be asked in class so that all may benefit.

Your name must be at the top of every file.

Exams

There will be a final. The final is cumulative. It is possible the exam will include multiple choice questions in addition to more complex written answer questions.

The class meeting immediately before the exam is for review. You guide this review. I will not present any material which is not prompted by your questions so come prepared. If you ask a question that I know to be on the exam, I will give you a “perfect” answer – i.e. I will not hold back.

Computers

A “good” computer is recommended. Sometimes, for various reasons, a student may not be in possession of a “good” computer. This puts the student at a disadvantage. If this is you, please talk to me as I might be able to help.

Please interrupt me

Please Do! It is absolutely critical that you get your questions answered in the moment.

Advising and accommodations

The Carthage Advising Center offers a variety of services and accommodations to students with disabilities, based on appropriate documentation, nature of disability, and academic need. To initiate services, students should meet with Diane Schowalter at the start of the semester to discuss reasonable accommodation. After meeting with Diane Schowalter, students in need of accommodations should also speak with individual faculty members from whom accommodations are sought to communicate their needs and make requests in a timely manner.

If a student does not request accommodation or provide documentation, the faculty member is under no obligation to provide accommodations. You may contact Diane Schowalter at ext. 5802 or via e-mail at dschowalter1@carthage.edu.

A note about accessibility

Carthage College strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers due to your disability (including mental health, learning disorders and chronic medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, you also need to register with Diane Schowalter in Learning Accessibility Services (dschowalter1@carthage.edu).

Academic Success and Health

Good health can help you achieve academic success. The Health and Counseling Center (HCC) supports students by addressing physical, mental, and emotional well-being. All services are free and confidential and are provided by experienced and licensed professionals. Services are available to all full-time, undergraduate students.

TARC 2240 | 262-551-5710 | <https://www.carthage.edu/campus-life/health-counseling/>
Mon-Fri 8:00am-4:00pm

Academic Honesty Guidelines

Carthage College Academic Honesty Guidelines are found at:

<https://www.carthage.edu/community-code/academic-concerns/academic-honesty-guidelines/>

TL;DR

| <i>Topic</i> | <i>Summary</i> |
|----------------------|----------------|
| Plagiarism | Don't do it |
| Cheating on a Test | Don't do it |
| False Citation | Don't do it |
| Multiple Submissions | Don't do it |
| False Data | Don't do it |

Here's a simple rule. You can talk about strategy and concept. You can't look at code.

Here's the thing: If you cheat, you cheat yourself. Someone is paying a boatload of money for you to be here (have you thanked them!). You owe it to them and your current and future selves to be the best you can be. Cheating does not help you.

COME TO ME FOR HELP – OR THE TUTORS – IT IS YOUR PERSONAL RESPONSIBILITY TO AVOID FEELING IT NECESSARY TO CHEAT. DON'T PUT YOURSELF IN THAT PREDICAMENT IN THE FIRST PLACE!

My office hours

I have always been very available to students. In the era of COVID I am even more available. Just make an appointment when it is convenient for you, using Google Calendar. By adding my calendar to yours, you'll see when I am available.

Select show co-worker's schedule and enter "pkivolowitz". When my schedule is visible, pick a blank spot. Click on the blank spot you want and enter an informative title and adjust the time carefully. THEN MAKE SURE YOU SEND ME AN INVITATION. Do this by entering my email address where guests are specified. Make sure you click the "send invitation" button shown to you when you've saved the meeting.

No office hour will be offered face-to-face in person. All contact will be by digital means, even if it means we're separated by only my office wall.

Possibility of changes made to the course

Please note the above schedule, policies, procedures, and assignments in the course are subject to change in the event of extenuating circumstances, by mutual agreement and / or to encourage better student outcomes.

Concerning learning outcomes

Students vary in their competency relative to any stated outcome. Students can expect to achieve stated outcomes *only if* they honor all course policies, attend classes regularly, complete all assigned work in good faith and on time and meet all other course expectations of them as students.

Suggestion for how to do well in all CS courses

Start Early Work Steadily

and remember...

The kid who seems to know everything
probably thinks you're the kid who
knows everything

so...

ASK QUESTIONS!