

CISC 220: Data Structures

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<https://www.eecis.udel.edu/~yarringt/CISC220>

Class Times: 010: TR 9:30 – 10:45 Gore Hall 116
011: TR 2:00 – 3:15 Kirkbride 005
012: TR 3:30 – 4:45 Kirkbride 005

Lab Times: 020L Tu 11:15-12:05 Spencer Lab 010
021L Tu 12:20-1:10 Spencer Lab 010
022L Tu 1:25-2:15 Spencer Lab 010
030L W 8:00-8:50 Spencer Lab 010
031L W 9:05-9:55 Spencer Lab 010
032L W 10:10-11:00 Spencer Lab 010
040L W 2:30 – 3:20 Spencer Lab 010
041L W 3:35 – 4:25 Spencer Lab 010
042L W 4:40 – 5:30 Spencer Lab 010

Course Description:

This course will review data type abstraction, recursion, arrays, stacks, queues, linked lists. There will be emphasis on dynamic storage management, garbage collection, trees, graphs, tables, sorting and searching as well as Complexity Analysis.

Suggested Textbook: Weiss, Mark Allen: *Data Structures and Algorithm Analysis in C++*

Primary C++ Reference: [http:// www.cplusplus.com](http://www.cplusplus.com)

CLASS RULES:

1. Failing all three exams is automatic failure in this course, regardless of total class scores
2. Labs and projects must compile in order to be graded.
3. All labs and projects must be submitted via Sakai.

COMMON COURTESY:

1. Leaving in the middle of class for any reason is extremely rude and disruptive to your fellow classmates and to me. If you must leave early and you know ahead of time, let me know and sit as close to the door as possible so that you can leave with the least amount of disruption.
2. Cell phone and laptop use are encouraged, as long as their use is limited to that pertaining to class. I reserve the right to confiscate cell phones and close laptops that are being used for anything other than class work.
3. If you don't attend class, don't expect to pass this course

ATTENDANCE POLICY:

- Lab session attendance is mandatory. Unless otherwise noted in class, you must attend your scheduled lab session. The only accepted excuse for missing lab sessions are official notifications from the Dean's office. Missing a required lab will result in an automatic 25% reduction on that week's lab or project
- Attendance in lecture is expected. Announcements, hands-on assignments, due dates, and even extra credits may be given in class and only in class. You are responsible for anything taught or announced in lecture. If you choose not to come, you will miss points for any class-based assignments. In addition, it is your job to find out what is going on **without extra help from me. This includes class notes!**

EMAIL:

Email is the only consistent method of communication I have with the entire class. It is imperative that you know that you are receiving mail from the class list. Anything mailed at least 24 hours prior is considered your responsibility to know. It may be very helpful to check email before, during or after any unusual event (i.e. power outages, snow, tests, holidays) Check the UD Homepage for any University wide cancellations.

Lab session attendance:

Lab session attendance is mandatory, unless otherwise noted. *To receive full credit for attendance, you must attend the lab session until you have COMPLETED the lab being worked on that day or until the lab session is over. If you leave early without turning in that week's lab, it will be considered an absence.*

Learn your Section number and the name and email address of your TA!

Your TA is responsible for grading, and thus may have specific preferences for how you turn assignments in, how you format your code, how you show that your code is working correctly, etc. If you have any questions specifically about grading, you should contact your TA

Lab assignments:

Labs are due **Wednesday** at midnight unless otherwise instructed. **Labs will only be accepted one day late.** If you turn it in after midnight on the due date, it will be considered late. Labs turned in 1 day late will lose 10%. After that, labs will not be accepted and you will receive a 0 on that lab.

Lab score disputes:

Your TA will email you when lab grades have been released. **You have two weeks after the TA has released scores to dispute your grade.** After that, the grade is final.

EXAMS:

Attendance is MANDATORY for all exams. If an exam is missed because of an excused absence, it cannot be taken later and it will not be included in the computation of the final grade; the other exams will be weighted extra. If an exam is missed because of an unexcused absence, it cannot be taken later, and a score of 0 will be included in the computation of the final grade.

The Final Exam is **cumulative**. Final Exam Schedules are not known until halfway into the course. *Do not plan to leave before the end of exam period.* This class has been known to have its final on the last possible day.

ACADEMIC DISHONESTY:

Academic Honesty: Discussion with others to better understand material from class or the text, or to better understand general programming concepts is ENCOURAGED. Those discussions should end when writing your specific program solutions. Except if working with your lab partner (if partners are permitted), students are PROHIBITED from accessing or comparing assignment answers with those of any other person, prior to submitting the assignment. Students may not use any web site that contains answers. Copying all or portions of another person's program or lab is plagiarism, a serious offense, and the one most common in computer science courses. Anyone that provides program code to another group is also guilty of academic dishonesty. **Both will be prosecuted in accordance with the University's Policy on Academic Honesty.**

If you are struggling with an assignment, seek help from a teaching assistant or from the instructor. If you do not have sufficient time to complete an assignment, then submit a partial solution. Do not get answers from, or compare answers with, another person or group. Note that by putting your name on your submission, you are claiming that you were a full participant in doing the work that resulted in your submission. If you did not participate in, or do not understand the solution that your submitting, remove your name or don't submit it. Note that submitted assignments are compared (by computer) with each other. Refer to the Office of Student Conduct's website for more information.

Course Assignments:

All reading assignments, labs and projects will be posted to the course Web site (<https://www.eecis.udel.edu/~yarringt/CISC220>). You are responsible for checking the Web site regularly to make sure you are on target. Additional assignments (both required and extra credit) may be given out in class.

All course assignments, including homeworks, labs, and projects (and potential extra credits) must be submitted via Sakai.

Grading:

Midterm 1	15%	Projects, Labs, Assignments, and Homeworks	47%
Midterm 2	15%	Class Participation	3%
Final Exam	20%		

Scale:

Number	100-95	94-90	90-87	87-83	83-80	80-77	77-73	73-70	70-67	67-63	63-60	<60
Letter	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Schedule:

Week of	Tentative Course Schedule
Aug 28	Syllabus / C++ Intro (<i>No Lab</i>)
Sept 4	C++: Arrays, Structs, Algorithm Analysis (<i>Sep 4 – Labor Day Holiday</i>)
Sept 11	C++: Algorithm analysis, Pointers, Memory Management Sept 12: Last day to register for a course
Sept 18	C++: Classes, Pointers, Memory Management
Sept 25	ADTs, Linked Lists
Oct 2	Trees, Search Trees
Oct 9	Exam 1: Tues, Oct 11 Tree traversal/B-trees
Oct 16	Heaps
Oct 23	Queues, Sorts <i>Tues, Oct 24– Last day to withdraw without penalty</i>
Oct 30	Sorting
Nov 6	Sorting, Hashing
Nov 13	Hashing, Graph Algorithms Exam 2 (Tentative)
Nov 20	<i>Classes suspended for Thanksgiving break</i>
Nov 27	Graph Algorithms
Dec 4	Graphs and search <i>Dec 8: Last Day of Class</i>
Dec 11	Finals <i>Dec 16: Last day of finals</i>