

CS 237 Data Structures

Section 010

Spring 2024

Meeting Time & Place: 3:00–4:20 PM T TH in 299 OM

Instructor: Daniel Spiegel

Office: 251 Old Main; Phone: (610)683-4423 **Zoom:** <https://kutztown.zoom.us/j/91233645003>

Hours: (All are also on Zoom) 12:00-1:15 T, 10:30-11:30 W (Zoom only), 4:20-4:35 TH (will change in March) email answered 24/7/365; Zoom meetings easily arranged

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Prerequisites: CS 136 with a C or better, or equivalent

Text: Data Structures & Problem Solving Using C++, by M.A. Weiss, ISBN: 0-201-61250-X

Exams: There will be 2 midterm(s) and a final exam during final exam week. You must get a passing (60%+) grade on exams, collectively, to pass this course.

Attendance: Optional. You are responsible for material covered in class and the corresponding material in the text. If you do not attend class, the material is assumed to be understood.

Make-ups: You will not be permitted to make up an exam without a documentable excuse for your absence.

Programs: Programming assignments will be issued in class and submitted electronically, using D2L & the turnin script. There will be at least three (and possibly as many as five) programming assignments. You must earn at least 60% of the possible points on *all* programs, collectively, to pass this course. Submissions are expected to be by the deadline. Submitting late is at your own risk. If I already graded the assignment, you're out of luck.

Your programs are to be well written, fully documented, and easily readable. They must also be modular, with each module handling a single task only and your main routine should be little more than a series of function invocations. Proper object oriented design is expected. Consistency in style within a program is a must.

Start your programs early. You won't be able to properly grasp concepts if you pull an "all-nighter" to desperately try to finish a program before it is due.

Homework/Participation: Homework assignments may be given periodically. If so, they will be due on a given date; no late submissions will be accepted. Additionally, participation in class is expected.

Grading: Grading is on a straight 90 80 70 60 scale. Individual exams may be curved, only if necessary. Weights of grades are:

Programs: 40%

Midterm(s): 15%

Homework/Participation: 10%

Final Exam: 20%

Grade	Scale
A-	[90 , 93)
B+	[87 , 90)
B-	[80 , 83)
C+	[77 , 80)
C-	[70 , 73)
D+	[67 , 70)

Academic Dishonesty:

General Statement: I am against it. Violators will receive the maximum allowable penalty for any infraction.

Programs: Your programs are to be, in the large, your own work. If you use any code that you did not write, omitting credit to the author constitutes academic dishonesty. Using the code of a classmate or providing your code to a classmate(s) is most definitely academic dishonesty. Feel free to discuss and exchange ideas with your peers, but do your own work.

Recorded Lectures

Lectures may be recorded with good cause, but this is an **in-person** course. A Zoom link is provided in case the lecture is being attended remotely or the course instructor chooses to present the lecture online. Some lectures likely will be via Zoom and ample notice will be provided. Recordings of Zoom sessions will be posted.

Tutoring

If you engage the services of a tutor during the term, you are encouraged in the strongest terms to inform me of the tutor's name and email. I prepare notes on each project and provide them to all graduate assistants and tutors. These notes will allow your tutor to provide you with the most effective possible assistance.

Classroom Etiquette:

Consideration for your classmates, instructor, and the class is expected. Come to class **on time and prepared to learn**. No sleeping or noisy eating. If you can't whisper quietly, please don't carry on private conversations. Coming and going during class should only occur in unavoidable situations. And, last but not least, **your cell phone must not be a distraction to anyone in class, including yourself**.

Tentative Class Schedule:

The following is a **tentative** class schedule. It is subject to change. Note that some topics may extend past one week. At the end of each chapter are summaries and exercises. You are expected to include the pertinent topics from the end of each chapter in your reading. Tests may contain items from these sections. Questions on these are welcomed.

CS 237 Tentative Schedule

Week	Topics	Reading
		Chapter(s) / Section(s)
1	Review of CSC 136: Stacks & Queues Strings ; Intro to STL;	1-3 (Ch. 9 of 136 text) 7
2-3	Inheritance, Project 1	4
3-4	Inheritance, con't.	4
5-6	Intro to Algorithm Analysis, Exam 1	6
7	Recursion	8
8-9	Sorting	9
9-10	Trees	18
10-11	Trees, Exam 2	19.1-19.3
12	Priority Queues	21
13	Hash Tables	20
14	Design Patterns (if time)	5

Final Exam: Scheduled: 11 AM on Tuesday, May 9, 2024 - Alternate time possible