

CSE 332

Data Structures and Parallelism

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Course Web Page: <https://courses.cs.washington.edu/courses/cse332>

Description: Covers abstract data types and structures including dictionaries, balanced trees, hash tables, priority queues, and graphs; sorting; asymptotic analysis; fundamental graph algorithms including graph search, shortest path, and minimum spanning trees; concurrency and synchronization; and parallelism. **Prerequisites:** CSE 311

Course Text:

(Optional) *Data Structures and Algorithm Analysis in Java 3rd Ed.*, by Mark Allen Weiss, Addison Wesley: 2012, ISBN-10: 0132576279 (The 2nd Edition is also fine and may be cheaper to get.)

Our course calendar will list sections of the textbook that are most relevant to the topic discussed in class that day. You may find the textbook useful to clarify and learn more about topics discussed during lecture. We will not be assigning problems from the textbook. We will also use a set of free online notes by Dan Grossman for the material on [parallelism and concurrency](#)

Computing Resources: We will use Java for programming assignments. We strongly recommend, although will not require, that you use the IntelliJ development environment. Links for downloading and installing Java and IntelliJ can be found on our course web page.

Communications: The course message board should be your first stop for questions about course content and assignments. Before posting, first check that your question has not already been answered on the message board, and if not, ask it there. If it is not possible to ask your question on the message board without revealing details of your solution, please either use a private post on the message board or send email to cse332-staff at cs.washington.edu, which will go to the instructor and TAs. In general we prefer that you send questions to the cse332-staff list instead of to an individual staff member so that you will get a faster response time and the entire staff can remain aware of questions and issues. You will be automatically subscribed to the course email list if you are registered for the course and will be held responsible for anything posted there (only course staff will post to the course email list).

Assignments:

Exercises: There will be weekly exercises. These will directly test your understanding of topics we are covering and the theory behind them. Some exercises require you to write

short bits of code or complete an activity online, while others are more traditional “written” exercises. For “written” exercises, we require these be turned in electronically. LaTeX is a recommended option, but neatly written scanned documents will also be fine as long as they are legible. Exercises are to be done **individually**.

Programming Projects: There will be three large programming projects. Programming projects will be graded on correctness, architecture and design, and analysis. Note that your answers to the writeup questions will be heavily weighted. There is not a heavy emphasis on code style, as long as your code is readable and you follow the guidelines explicitly given in the project handouts.

Exams: We will have one midterm exam on Monday, July 18th in lecture: 9:40-10:40am. And a final exam across two days on Thursday, August 18th during section and Friday, August 19th during lecture: 9:40-10:40am.

Please contact your instructor immediately if you have a conflict with either of these exam times.

Exams will normally be closed-book, closed-notes, and calculators will not be allowed.

Late Policy: You will have **four token late days** that you can use **only** for projects. A late day allows you to turn in an assignment up to 24 hours later without penalty. In a partner project, both partners must have a late day to submit a partner project late.

Regardless of how many late days you have, you cannot submit a project **more than 48 hours** after it is due without prior permission from course staff.

You may not submit exercises late during the quarter. Part of this policy is because exercises are meant to keep you up to speed with lecture content and they should not take very long to complete. Note also that a majority of exercises are completely autograded so you can resubmit as many times as needed before the deadline to get full points.

Late days are intended to help you manage your time and unexpected life circumstances; leftover late days will not contribute to your grade in any way. If there are extenuating circumstances that prevent you from submitting an assignment on time, you should discuss this with the instructor (preferably in advance).

Grading and Evaluation: Grades will be computed approximately as follows (weights may be modified):

- Exercises: 25%
- Programming Projects: 37%
- Midterm: 15%
- Final: 20%
- Course-Wide Participation: 3%

Course-Wide Participation: You can earn credit toward your course-wide participation grade for any of the following:

- Attending and asking questions in office hours, lectures, and sections.
- Answering questions in section and on the discussion board.
- Keeping up with the discussion board.
- Voting on peer instruction questions.
- Discussing with other students during group work time in section and lecture.
- Helping others in lecture, during office hours, and on Ed Discussion.

Note that you do not have to complete all of the listed activities to get full credit for course-wide participation. Participation grades are kept internal to the staff (i.e., not disclosed to students).

Lecture Polling: Lecture will be supplemented with in-class polling questions that will give you a chance to solve a question related to lecture content, discuss with your peers, and give the instructor a sense of how the class is doing. This is designed to give you a chance to check your understanding of the material by applying it on-the-spot, as well as an opportunity to interact with your classmates.

1. Register your UWNetID on the [Poll Everywhere Website](#). More information can be found from [IT Connect](#).
2. Optionally, you may download the Poll Everywhere [mobile app](#).
3. Bring an Internet-enabled device with you to lecture.

You will receive credit for voting on polling questions in lecture and your response does not need to be correct. If you need to miss class, these will be available for you to answer as an online survey until the next lecture. Over the course of the quarter, you only need to **vote on 60% of the available polling questions** to receive full credit, meaning that you are allowed to skip or miss a number of them with no penalty!

If you might have an issue with the in-lecture polling (e.g., not bringing an internet-enabled device, difficulty physically going to class), reach out to the instructor as soon as possible.

Extra Credit: We will keep track of any extra features you implement for programming projects (the Above and Beyond parts). You won't see these affecting your grades for individual projects, but they will be accumulated over all projects and used to bump up borderline grades at the end of the quarter. The bottom line is that these will only have a small effect on your overall grade (possibly none if you are not on a borderline) and you should be sure you have completed the non-extra credit portions of the homework in perfect form before attempting any extra credit. They are meant to be fun extensions to the assignments.

Collaboration & Academic Integrity: Programming projects will be “partner assignments” in which you will work closely with another student. For all other exercises, we expect all written/programmed work to be your own. **You must at least attempt a problem on your own before discussing it in a group**—but after first attempting on your own, we do encourage you to brainstorm together! During brainstorming sessions, you may use a whiteboard, but you may not take any typed/written or photographed work outside of the session. If you collaborate with anyone in any capacity, you must identify them at the top of your assignment as a collaborator.

Referring to solutions found on the web or solutions from this or other courses from previous quarters is also considered cheating. We plan on running similarity-detection software over all submitted student assignments, including assignments from past quarters.

If you do not follow these rules, you will be considered to have cheated. Cheating is a very serious offense. If you are caught cheating, you can expect a failing grade and initiation of a cheating case in the University system. Cheating is an insult to the instructor, to the department, and most importantly, to you. If you feel that you are having a problem with the material, or don't have time to finish an assignment, or have any number of other reasons to cheat, then talk with the instructor. Copying others' work is not the solution.

To avoid creating situations where copying can arise, never email or post your solution files. You can post general questions about interpretation and tools but limit your comments to these categories. If in doubt about what might constitute cheating, send the instructor an email describing the situation. For more details see the [Academic Misconduct webpage](#).

Disability Resources: The [Disability Resources for Students \(DRS\)](#) is a unit within the Division of Student Life and is dedicated to ensuring access and inclusion for all students with disabilities on the Seattle campus. They offer a wide range of services for students with disabilities that are individually designed and remove the need to reveal sensitive medical information to the course staff. If you have a medical need for extensions of assignment deadlines, these will only be granted through official documentation from DRS. Browse to [this link](#) to start the process as soon as possible to avoid delays. You can refer to the university policies regarding [Disability Accommodations](#) for more information.

Religious Accommodations: Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](#). Accommodations must be requested within the **first two weeks of this course** using the [Religious Accommodations Request form](#).

Extenuating Circumstances and Inclusiveness: We recognize that our students come from varied backgrounds and can have widely-varying circumstances. If you have any unforeseen or

extenuating circumstances that arise during the course, please do not hesitate to contact the instructor in office hours, via email, or private message board post to discuss your situation. The sooner we are made aware, the more easily these situations can be resolved. Extenuating circumstances include work-school balance, familial responsibilities, military duties, unexpected travel, or anything else beyond your control that may negatively impact your performance in the class.

Additionally, if at any point you are made to feel uncomfortable, disrespected, or excluded by a staff member or fellow student, please report the incident so that we may address the issue and maintain a supportive and inclusive learning environment. Should you feel uncomfortable bringing up an issue with a staff member directly, you may consider sending [anonymous feedback](#) or contacting the [Office of the Ombud](#).