# CSE 312: Foundations of Computing II

Summer 2023

| | | | |
|---|---|---|---|
| **Instructor:** | Shreya Jayaraman | **Time:** | MWF 12:00-1:00pm PST |
| **Email:** | shreyaj@cs.uw.edu | **Location:** | PCAR 391 |
| **Office:** | CSE 214 | | |

**Course Resources:**

1. Course Website: https://courses.cs.washington.edu/courses/cse312/23su
2. Gradescope, Edstem, Calendar, and other materials linked from the website above.

**Announcements:**

You should regularly check the class website and EdStem for announcements and other information, including the most up-to-date information on homeworks and errata. Most announcements will be emailed out via EdStem.

**Textbooks:**

There are no required textbooks for this course. However, you may find useful a draft textbook written by Alex Tsun from his earlier offering of 312, linked on the course webpage.

**Prerequisites:**

CSE 311 and MATH 126. Here is a quick rundown of some of the mathematical tools we'll be using in this class: calculus (integration and differentiation), linear algebra (basic operations on vectors and matrices), an understanding of the basics of set theory (subsets, complements, unions, intersections, cardinality, etc.), and familiarity with basic proof techniques (including induction).

**Lectures:**

We will be holding live lectures in PCAR 391 on Mondays, Wednesdays, and Fridays, 12:00PM – 1:00PM Pacific Time. The lectures will be recorded on Panopto, and you will be able to access those recordings within a few hours after class on Canvas. However, we encourage you to attend live lectures whenever possible.

**Grading Breakdown:**

| | |
|---|---|
| Homeworks (approx. 7) | 50% |
| Concept Checks | 10% |
| Midterm | 15% |
| Final | 25% |
| Effort, Participation, and Altruism | EC |

Extra credit is incorporated after we have set the grade breaks according to the weights above.

Students often wonder whether the class is "curved." For example, whether the median course grade must be some specified value, or if we have a maximum amount of "good" grades we can assign. We do not "curve" in either of these senses. We do, though, look at the performance of students this quarter relative to other quarters (especially where homework problems were similar) to try to keep grades consistent between different quarters (that is that similar levels of understanding of the content would lead to similar grades). This process means that before we have collected all the grades, we don't know exactly where gradebreaks will be.

**Grade Guarantees:**

In order to give you a sense of how you are doing during the quarter, we offer the following minimum guarantees. That is, if your course average (calculated as described above) meets these thresholds, we guarantee that you will get a GPA of the grade shown or higher. These guarantees are intended to give you a simple way to interpret how you are doing throughout the quarter; we will still decide at the end of the quarter on exact grade breaks as described above. In the event that exams or homeworks (or both) turn out more difficult than intended, we may make grades higher than indicated here, but we will not make them less generous.

| **Course Grade** | **GPA Guarantee** |
|---|---|
| 90% | 3.5 |
| 80% | 3.0 |
| 65% | 2.0 |

**Homeworks**

- There will be approx. 7 homeworks, to be submitted on Gradescope.
- You **must** type the written parts up using LaTeX. There are links to resources for learning LaTeX on the website.
- You **must** show your work; at a minimum 1-2 sentences per question, but ideally as much as you would need to explain to a fellow classmate who hadn't solved the problem before. Be concise. A correct answer with no work is worth nothing, less than a wrong answer with some work. Use the section solutions we provide as a guide for the level of detail we are seeking.
- You **must** tag the question parts of your homework correctly on Gradescope and rotate the pages correctly. Failure to do so will **result in a 0** on **every** untagged or incorrectly rotated question. Please check your submission by clicking each question, and making sure your solution appears there. We recommend starting each problem on a new page to keep this simple.
- Once grades are released, regrades will open after a 24 hours cool-down period. Regrade requests are due on Gradescope within **one week** of grades being published.
- It is okay (and encouraged!) to brainstorm and collaborate with others in coming up with solutions, but you must list all your collaborators at the top of each homework.

**Concept Checks**

- Associated with each lecture, there will be a "concept check" for you to take on Gradescope. This will consist of a few questions that test your basic understanding of the concepts covered in lecture. The questions are intended to be very straightforward to answer; each concept check should not require more than about 20-30 minutes.
- Each concept check will be available within 30 minutes of the end of class and is due 30 minutes before the next lecture.
- You can submit your answers as many times as you want; we will only grade the final submission. Correct answers will reveal the answer explanation; all other answers will not, so you can keep trying until you see the answer explanation.
- Concept Checks can **not** be submitted late, but earning 80% in this category leads to 100% in the grade book. We will grade it as min{1, points earned / (.8*points possible)}. That is, getting 80% of the points on concept checks is enough to get full-credit (and you cannot get extra credit by getting a higher score).

- **Very important:** Please submit each concept check, regardless of how many problems you solve (even if you do none of the problems). If you don't submit them, you will not be able to look at the solutions afterwards.

**Effort, Participation, and Altruism:**

To encourage cooperative learning, you may earn extra credit for effort, participation, and altruism (EPA). These are some possible ways to earn points:

- Effort: Attending office hours, keeping up with or asking questions on EdStem, making progress on assignments.
- Participation: Attending lecture, attending section, interacting with the instructor, TAs and other students.
- Altruism: Helping others in lecture, during office hours, and on EdStem.

EPA scores are kept internal to the staff (i.e., not disclosed to students), but are intended to encourage behaviors that improve the classroom environment while not forcing students completely out of their comfort zones by providing many different avenues to get credit.

**Late Policy:**

- Homeworks: You will have **five** late days to use during the quarter for homeworks. You may only use 2 late days on any one homework. That is to say, if an assignment is due at 11.00pm on Wednesday, if you have enough late days, you can submit until 11.00pm on Friday. *Please note that due to final exam scheduling, you may only use ONE late day on the final homework assignment.*

  Note that the Gradescope submission box will close at the deadline time – you are encouraged to submit a few minutes before the deadline to avoid upload issues. Student often report issues with slow upload to Gradescope, or Latex compilation – plan ahead to account for this. We will treat a submission that is 1 minute late the same as a submission that is 1 day late.

  We will not accept submissions after the late deadline, except in the case of absolute, verifiable emergencies.
- Concept Checks: These cannot be submitted late, but earning 80% in this category leads to 100% in the gradebook.
- If you have extenuating circumstances that interfere with any of the above, please get in touch with the instructor as soon as possible.

**Sickness Policy:**

Late days are intended to handle "normal" issues during the quarter. Additional accommodations (e.g. extra late days or longer extensions on specific assignments) may be possible if you have an extended illness. Contact the instructor as soon as possible in such circumstances.

Don't come to the exams if you're sick! Contact Shreya once you know you're too sick to attend and we will work with you to decide which accommodation is appropriate to your illness.

**Exams:**

We will have a midterm and a final during the quarter. Both will be held during class time. The final will be on the last day of classes scheduled for the quarter.

**Academic Integrity:**
Academic integrity violations will be taken very seriously and may be referred to the Office of Academic affairs.

You are allowed (and encouraged!) to discuss homework problems with other students, as long as you:

- Do not take away any notes or screenshots during your discussion.
- Take a 30 minute break before writing up your solution individually.
- Cite the names of all of your collaborators somewhere in your writeup.

If you are confused as to whether or not some collaboration is allowed, ask us! No set of rules will be completely exhaustive.

If something weird happens, please tell us too! We will not consider any action to be a violation of the academic integrity policy if you tell us about it before turning in the assignment.

**Resources outside of 312:**
You are strongly encouraged to seek out resources beyond official course resources, with the following caveats:

- Definitions and terminology can differ significantly (and in subtle ways) depending on the author. Be careful that other resources are saying what you think they are saying.
- You may not search with the intent of finding a solution to the exact homework problem being asked.
- You may not use commercial tutoring resources like Chegg for the problems we ask, nor post our materials or your answers to those websites.
- You may not publicly post your solutions, even after the course is over. You also must not share your solutions with students taking future iterations of the course.
- You may **not** rely on ChatGPT or any other generative AI to answer any problems on the homeworks, concept checks or other problems we ask. We reserve the right to ask you to explain work you have submitted at any point in this course.

**Accommodations:**

- **Disability Accomodation Policy**: See here for the current policy.
- **Religious Accommodation Policy**: See here for the current policy.

**Acknowledgements:**
This course is largely influenced by previous offerings of CSE 312 by Anna Karlin, Robbie Weber, Martin Tompa and Alex Tsun. It is also influenced by Lisa Yan, Chris Piech, and Mehran Sahami from Stanford University's CS 109.