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CSE 121

Welcome!

Questions during Class?

Raise hand or send here

sli.do #cse121

BEFORE WE START

Talk to your neighbors:

Introduce yourself!

What is your name? Major?
What's a fun fact about yourself?

Music: ♣ CSE 121 25su Lecture Tunes ♣

Instructor: Hannah Swoffer

TAs: Abby, Hannah, Julia, Merav, Trey

Lecture Outline

Today:

1. Introductions!
2. About this course
3. Our learning model
4. Tools
5. Assessment and grading
6. Collaboration
7. Our first program!

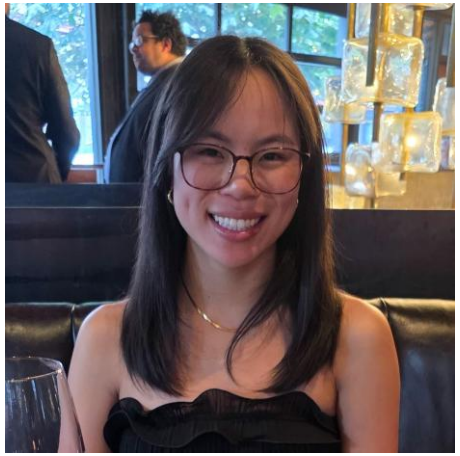
On Friday:

1. More programming :)

Hi, I'm Hannah! (she/her)

- Summer instructor for CSE 121
- Grew up in Snoqualmie, WA
- UW alum!
  - BA in Math
  - Minor in Data Science
  - CSE 121 TA for 5 quarters; CSE 122 and CSE 312 TA
- Non-CS interests: corgis, binge-watching tv shows, reading, and racket sports

Meet your 5 awesome TAs!



Y’all! (the students)

- ~ 45 students registered for this course!
  - Wide range of backgrounds, interests, and goals
  - Almost none are CSE majors
  - **This course is for students who are new to programming!**
- Strength in numbers!!
  - 45 of you > 6 of us
  - Have a question? **It's almost certain** that others do too – please ask!
- We’re a learning community!
  - One focus of quiz section tomorrow: *building* that community

Learning Objectives

or, "What will I learn in this class?"

Bottom line:
Intro to Programming, part 1

Not quite:

- "How do computers work?"
- "Intro to Java"
- "All you need to program"
- Math!

Learning objectives:

1. Computational Thinking
2. Code Comprehension
3. Code Writing
4. Communication
5. Testing
6. Debugging
7. Ethics & Societal Impact

Other Similar Courses

Course	Good choice if…
CSE 121 (this is us!)	• You've never programmed before AND • You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming
CSE 122	• You've done *some* programming (roughly one course worth) in any programming language AND • You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming
CSE 123	• You've taken CSE 122 (or equivalent) AND • You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming
CSE 143X	• You have programmed quite a bit before, but *not* in Java OR • You have lots of extra time to put into learning and tend to pick things up quickly
CSE 160	• You've never programmed before AND • You're interested in data science and analysis OR • You'd rather learn Python than Java* OR • You are, or want to be in a major such as Physics, Bio, Stat, etc. where your primary goal is analyzing data through programming (rather than building software)

Also see: guided self-placement test and CSE page on introductory courses for more info.

Course Components

Meetings

LECTURES (x16)

- We're here!
- Introduce concepts, practice ideas, discuss applications.
- Pre-class materials to prepare for class each day. Due **before** class.

SECTIONS (x14)

- Held in person
- More practice, reviews, applications
- TA advice, how to be an effective student
- Preparation for quizzes / exams
- Post-section work done at section or on your own. Due **day of section.**

Graded Assessments

PROGRAMMING ASSIGNMENTS (x4)

- Structured assignments
- Programming in Java
- Applying & implementing course concepts

CREATIVE PROJECTS (x4)

- More open-ended assignments
- Explore new ideas and applications

QUIZZES (x3)

- Taken in quiz section
- 55 minutes on paper

EXAM (x1)

- Final exam
- **Friday, August 22nd**
- 12:00 – 1:00 PM


Flying Pigeon

How Learning Works

Learning requires **active participation.**

It's not as simple as listening to someone talk at you!

- Requires **deliberate practice** in **learning by doing**
- Involves **productive struggle**
- Benefits from **collaboration**
- Does *not* work well if you cram everything!

Learning in CSE 121: Consistent Practice

Consistent, incremental practice works!

Gradual scale of difficulty (and grading)

Ungraded (but frequent; >2x /week)

1. pre-class work
2. lecture activities
3. quiz section problems*

Graded (but infrequent; 1/week)

1. creative projects (4)
2. programming assignments (4)
3. quizzes (3)
4. final exam (1)

*More details on explain Friday! (or see syllabus)

Learning in CSE 121: Metacognition

Metacognition: understanding how you **think** (and got to a solution).

- "what problem-solving approaches do I use?"
- "how did I rule out alternative solutions?"
- "why am I stuck right now? what will unblock me?"
- "are my study habits working for me?"

Metacognition is a **key** CS (and life!) skill; it's **built into our course**:

- relatively frequent, **graded** reflections
- semi-structured "nudges" (e.g. extra resub from post-section work)
- tight feedback loops

Learning in CSE 121: Live Support Systems

Programming is hard! We **want** to give you collaborative support!

Introductory Programming Lab (TA Office Hours) – starting Week 2

- ~18 hours/week (and highly rated in the class!)
- face-to-face help from TAs on **any** course questions

Instructor Office Hours (in-person & Zoom) – starting Week 2!

- Great for things from lecture, personal questions, or just saying hi

Learning in CSE 121: Async Support Systems

Ed Board

- Best for content and logistics questions – ~45 of you > 6 of us!!
- Encourage public posts, except for things about **your** graded work or code snippets
- Answer other students' questions – great way to learn!

Email

- Best for personal circumstances and/or private questions
- If unsure, always feel free to email Hannah at swofferh@uw.edu
  - May politely ask you to post on Ed instead!
- For emails, **please use your UW email** (protecting student privacy!)

The World Around CSE 121 & Reaching Out

Our goal is to give you a great CSE 121 experience!

But, we recognize that CSE 121 doesn't exist in a vacuum – there's a lot going on in the world that can impact your education.

We've designed course policies for maximum flexibility: resubmissions, dropping quiz/exam problems, asynchronous help & lecture recording.

Please reach out ASAP if you're struggling or have circumstances that require extra support. We're happy to help – we just need to know!

Resubmissions

Learning takes time and doesn't always happen on the first try!

Each week, one previous assignment or project can be resubmitted

- Must be accompanied by reflection explaining your change(s)
- Grade on resubmission replaces original grade
- Assignments eligible for only 3 "cycles" max after feedback released

We'll discuss more after our first assignment is graded. See syllabus!

Post-Section Work (PSW)

A "nudge" system: on section days with no quiz, you'll have a light homework problem and/or set of reflection questions **due at midnight that same day**.

- **graded on effort** (and intentionally short)
- in quiz section, will do the problem & leave time to reflect
- your reflections are very helpful to your TAs!

If you complete 9 of the 13 post-section works, you'll get an extra resub!

- no direct grade impact, think of it as optional/extra credit
- first PSW is the intro survey

Assessment

Why assessment?

- Our goal: you gain **proficiency of the concepts and skills** we teach
- We *assess* your proficiency by asking you to apply these concepts and skills on tasks
- Exposure to programming in different contexts and settings (ex: on Ed versus on paper)

Grading Scheme

Grades should reflect proficiency in course objectives.

All assignments, quizzes, and exams are graded with an "E/S/N" grade:

- **E (Excellent)**
- **S (Satisfactory)**
- **N (Not Yet)**

Grading Assessments

E/S/N (or ESN) grades per assessment type:

- Programming Assignments: 4 ESN grades (4 assignments, 16 total)
- Creative Projects: 1 ESN grade (4 projects, 4 total)
- Quizzes: 3 ESN grades (3 quizzes, 9 total)
- Final Exam: 6 ESN grades

We will also ignore your lowest 2 quiz/final exam grades.

Course Grades

We provide a "minimum grade guarantee" for translating to a numeric grade, but *not* a direct formula.

Much more on this in the syllabus! (and over the next few weeks)

Minimum Grade	Requirements
Total ESN available	33
3.5	27 Es **and** 3 additional S+
3.0	22 Es **and** 5 additional S+
2.5	17 Es **and** 7 additional S+
2.0	21 S+
1.5	14 S+
0.7	8 S+

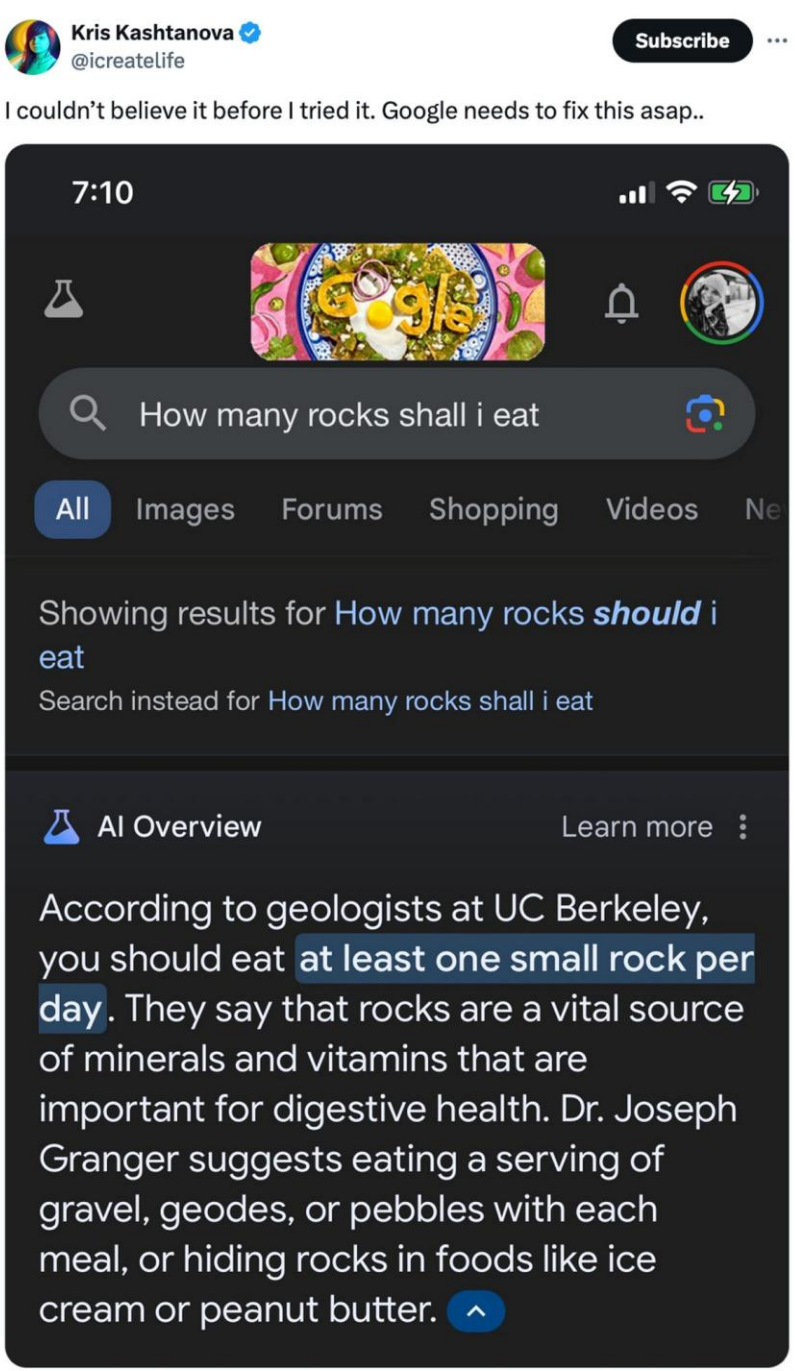
Collaboration Policy

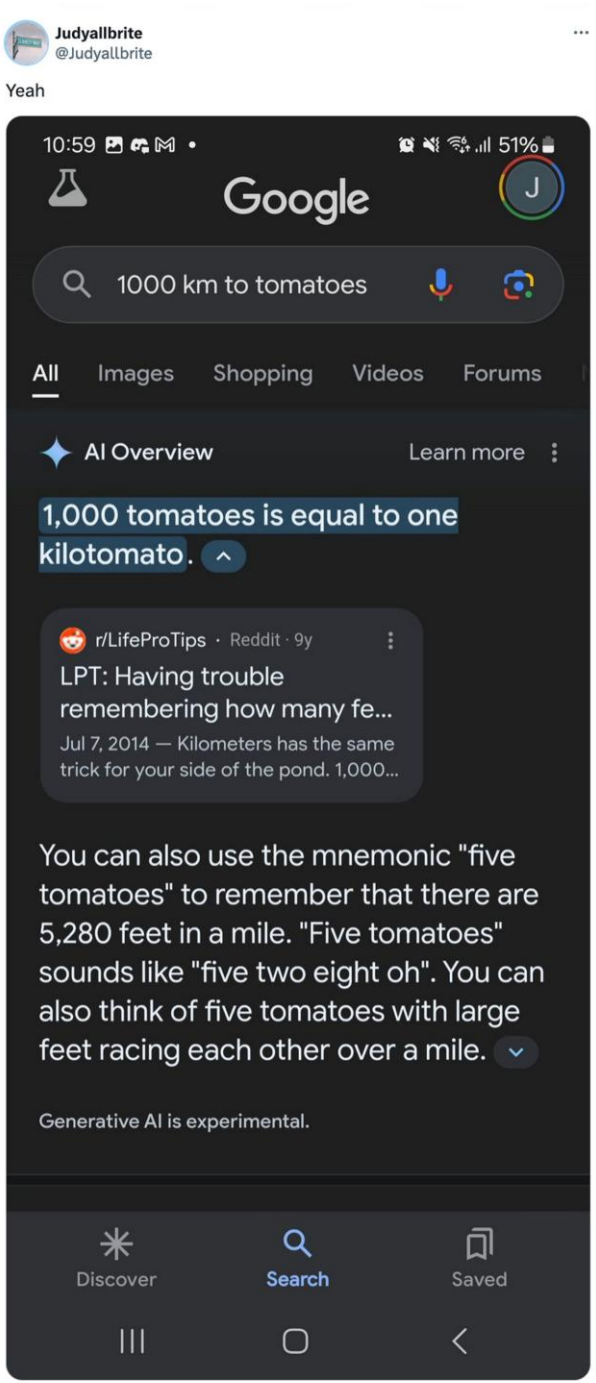
When we assess your work in this class, we need to know that it's yours.
Unless specified otherwise, **all graded work must be completed individually.**

Some rules to highlight:

- do not share your own solution code or view solution code from any source – including (but not limited to) other students, tutors, or the internet
- do not use AI tools (e.g. ChatGPT) on graded work in any capacity

See syllabus for more details (this is **very** important to understand).





Courtesy "Glue in Pizza? Eat Rocks? Google's AI Search Is Mocked for Bizarre Answers" by Ian Sherr for CNET. May 24, 2024

Just a bit more on AI…

With generative AI tools, there's a few things going on:

- making sure that your assessed work is yours
  - just the same as other interactive resources
- making sure that you're learning correct information
  - hard for you to judge if you're a beginner!
- potential environmental & ethical concerns
  - outside of scope of 121, but important!

Happy to talk more about this if you'd like! (e.g. in office hours)

Help Us Improve!

This is a relatively new course! We're *always* looking for feedback on how to improve the class for you and for future students.

- We ***really*** value your feedback!
- Let us know what's working and what isn't working for you!

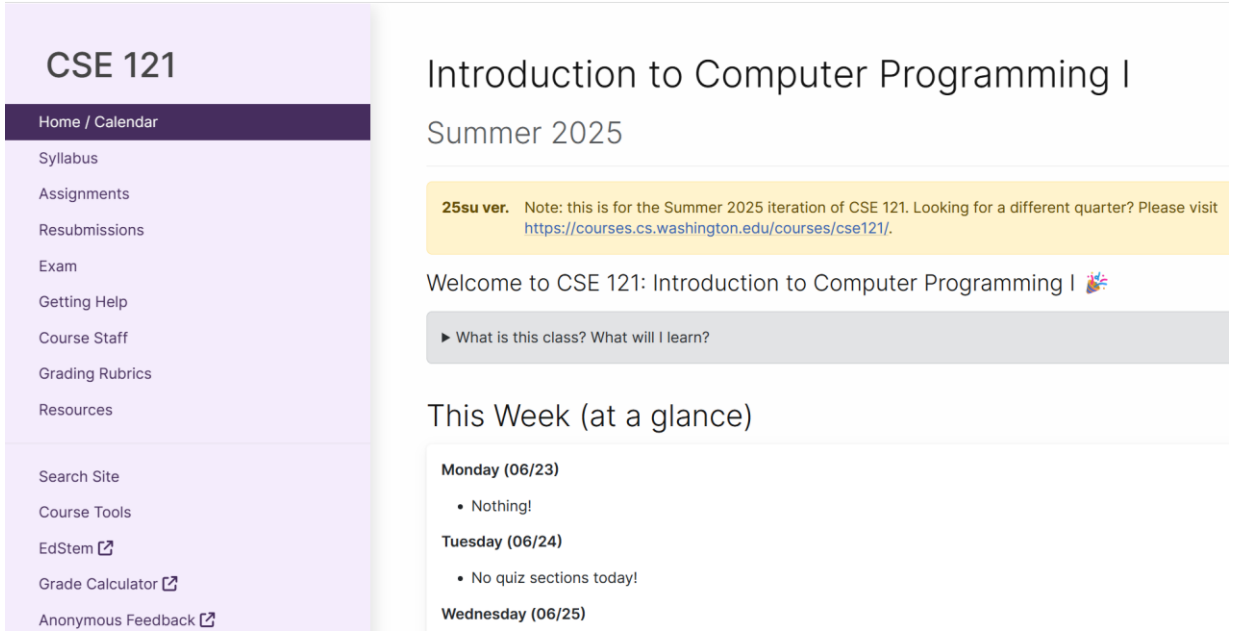
Several feedback mechanisms:

- Built into the class (e.g. reflections)
- Post on discussion board (can be public/private)
  - Note: anonymous is anonymous to other students, *not* to staff
- Use CSE's Anonymous Feedback Tool (also on website)

Course Website

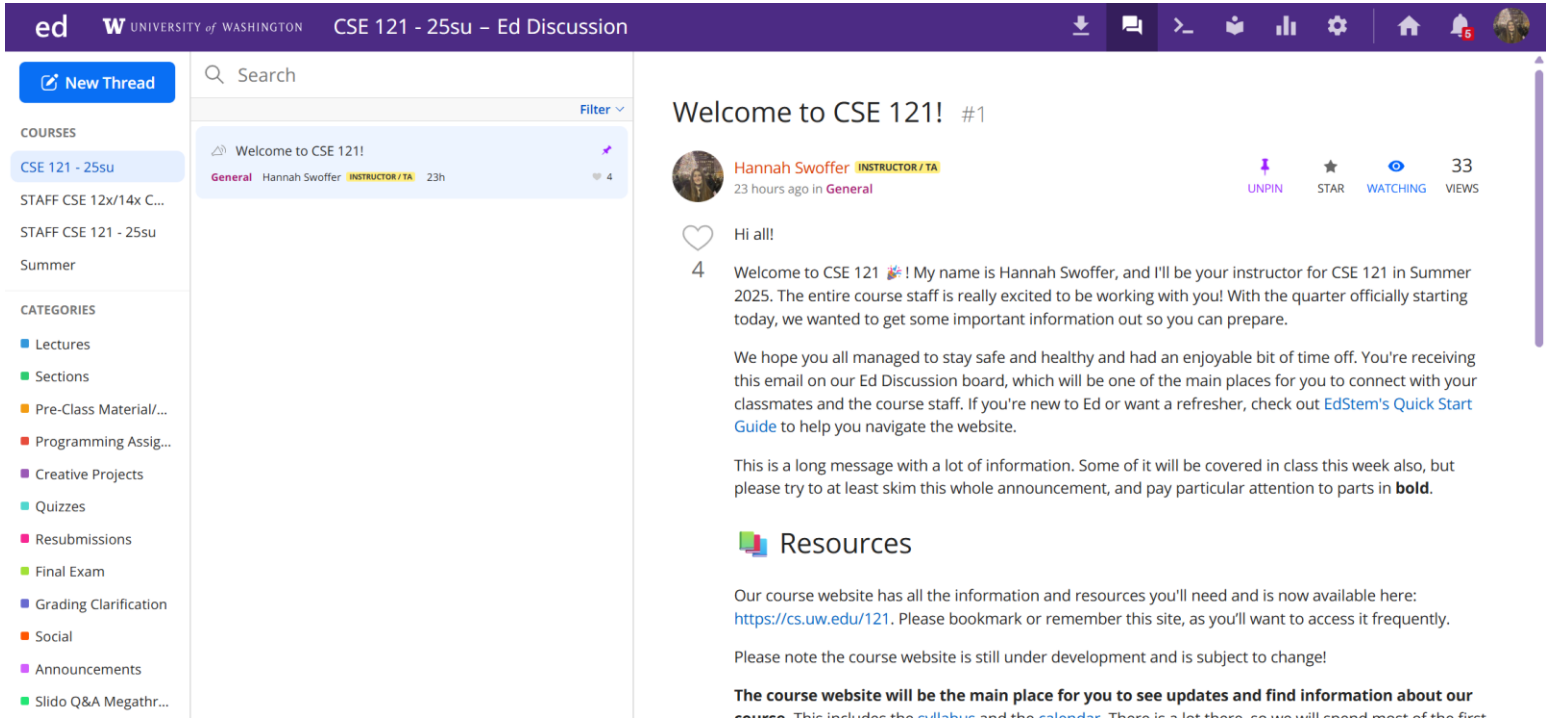
cs.uw.edu/121

- Primary source of course information (**not Canvas**)
- Calendar will contain links to (almost) all resources
- Please review syllabus ASAP
- Let's go on a website tour :)



Ed

- Our online learning platform
- Lessons, sections, quizzes
- Place to ask questions
- Also, **where we'll code!**
- Intro and walkthrough in Section 0



Some Other Course Tools

Sli.do
- Ask questions in class
- Live activities (ungraded)
- No account needed

Canvas
- Panopto lecture recordings (also linked from website)
- Some grades*

MyDigitalHand
- Queueing in TA office hours

Gradescope
- Quizzes and final exam grading

Switching to Ed: Our First Program!*

*note: in <u>almost</u> all cases, slides are *not* comprehensive. reviewing the slides will <u>not</u> cover all the content in lecture!

"Homework" for Next Time

First assignment will be released Friday, but there are some things to do in the meantime.

TODOs this week:

- Fill out the introductory survey (this is Thursday's post-section work)
- Go meet your TA and classmates in Thursday's quiz section
- Complete the pre-class material for Friday (see website/calendar)
- Check over syllabus details on website