LEC 00

### **CSE 121**

# Welcome!



Raise hand or send here

sli.do #cse121





### Talk to your neighbors:

Introduce yourself!

What is your name? Major? What did you do over winter break?

Music: 121 25wi lecture playlist 🛞



Christopher

Instructor: **Matt Wang** 

> TAs: Ailsa Alice Chloë

> > **Fthan** Hanna Hannah Hibbah Janvi Judy Julia Kelsey Luke Maitreyi Lucas Merav

Samrutha Ruslana Sam

Sushma Vivian

Shayna

### **Lecture Outline**

### Today:

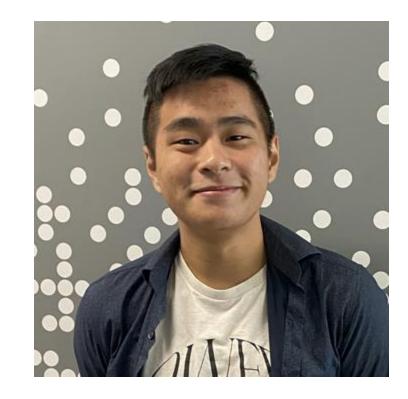
- 1. Introductions!
- 2. About this course
- 3. Our learning model
- 4. Tools
- 5. Our first program!

### On Friday:

- 1. Assessment and grading
- 2. Collaboration
- 3. More programming:)

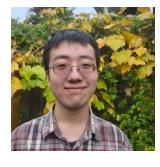
# Hi, I'm Matt! (he/him)

- new-ish Assistant Teaching Professor in CSE
- grew up in Toronto (and sometimes, Tokyo)
- went to UCLA!
  - BS & MS in Computer Science
  - BS in Math-Economics
- CS interests: CS Education, "open-source", programming languages, accessibility
- non-CS interests: reading, music, video games, & winter sports!



# Meet your 22 <u>awesome</u> TAs!













































# Y'all! (the students)

- ~ 411 students registered for this course!
  - wide range of backgrounds, interests, and goals
  - almost <u>none</u> are CSE majors
  - everyone is new to programming
- strength in numbers!!
  - 411 of you >>> 23 of us
  - have a question? **Almost certain** that others do too please ask!
- we're a learning community!
  - one focus of quiz section tomorrow: building that community

# 12x community standards

We watched the <u>12x community standards video</u> in class!

## **Practice: Think**



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### **Think-Pair-Share: Inclusive Environments**

CSE 121 will have many think-pair-share activities. Let's practice! Today's think:

# "What was an experience you had that made you feel welcome or included in a learning environment?"

- **1. think** on your own, in silence for about ~ 30 seconds
- 2. pair with your neighbor about it (and introduce yourself!!)
- 3. share in sli.do & in class (I'll take a few volunteers from both)

later, I'll go through all responses and summarize:)

# **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!)	<ul> <li>You've never programmed before AND</li> <li>You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming</li> </ul>
CSE 122	<ul> <li>You've done some programming (roughly one course worth) in any programming language AND</li> <li>You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming</li> </ul>
CSE 123	<ul> <li>You've taken CSE 122 (or equivalent) AND</li> <li>You are, or want to be in a major such as CS, CE, ECE, Info, etc. that requires Java programming</li> </ul>
CSE 143X	<ul> <li>You have programmed quite a bit before, but not in Java OR</li> <li>You have lots of extra time to put into learning and tend to pick things up quickly</li> </ul>
CSE 160	<ul> <li>You've never programmed before AND</li> <li>You're interested in data science and analysis OR</li> <li>You'd rather learn Python than Java* OR</li> <li>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)</li> </ul>

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

# **Course Components**

#### Meetings

#### **LECTURES**

(x20)

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

#### **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

#### SECTIONS

(x16)

- 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.

#### QUIZZES

(x3)

#### EXAM

(x1)

- Taken in quiz section
- 45 minutes on computer

- Culminating exam
- Tuesday March 18<sup>th</sup>
- 12:30 2:20 PM



# **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 <u>frequent</u>; >2x /week)

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

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

Graded (but <u>infrequent</u>; 1/week)

<sup>\*</sup>extra resub – we'll explain Friday! (or see syllabus)

# Learning in CSE 121: Metacognition

Metacognition: understanding <u>how</u> 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

- > 40 hours/week (and <u>highly rated</u> in the class!)
- face-to-face help from TAs on any course questions

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

- I don't byte (most of the time)
- 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 411 of you >> 23 of us!!
- Encourage public posts, except for things about your graded work
- Answer other students' questions great way to learn!

#### **Email**

- Best for personal circumstances and/or private questions
- If unsure, always feel free to email Matt at <a href="mxw@cs.washington.edu">mxw@cs.washington.edu</a>
  - 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!

# 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!

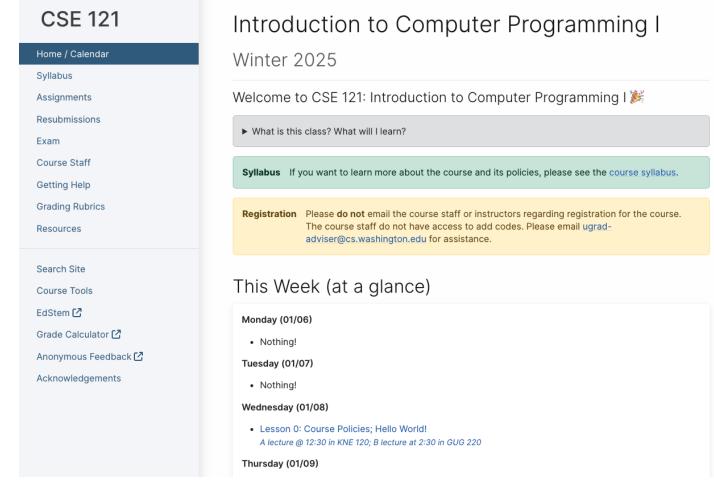
#### Several feedback mechanisms:

- built into the class (e.g. reflections, mid-quarter feedback sessions)
- post on discussion board (can be public/private)
  - note: anonymous is anonymous to other students, *not* to staff
- use <u>CSE's Anonymous Feedback Tool</u> (also on website)

### **Course Website**

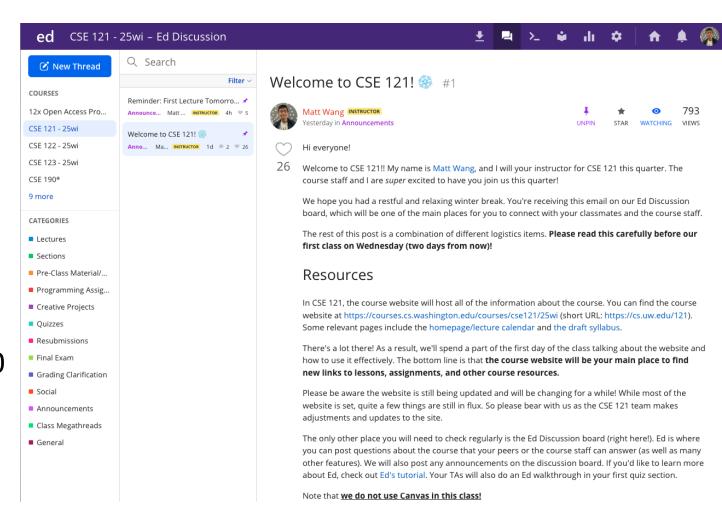
### cs.uw.edu/121

- 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\*

# **Switching to Ed: Our First Program!\***

<sup>\*</sup>note: in <u>almost</u> all cases, slides are *not* comprehensive. reviewing the slides will not 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 <u>introductory survey</u> (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