

CSE114A Lecture 1

Agenda:

- welcome!
 - me: Lindsey Kuper
349B in Engineering Z
- course logistics
 - Zulip is where we do (almost) everything
 - website
 - course staff
 - high-level schedule for the quarter

1 week { - Get used to a new way of thinking about computation & programming (Lambda calculus)

3-4 weeks or so

- Get used to Haskell
Why? 2 reasons

main reason

→ - Good substrate for programming languages

secondary reason

→ - Haskell itself is a great example of a modern, sophisticated PL.

the rest

- The main thing: Designing and implementing little languages!

- PL in a nutshell
- Course logistics: grading, lecture quizzes, etc.

What is (the study of) Programming Languages?

an analogy

human languages: linguistics :: programming languages: Field
of
PL
(C, Python, Rust,
Java, Haskell,
etc.)

• Syntax — what languages and programs look like

★ Semantics — what languages and programs mean

• pragmatics — how languages and programs are used

What do PL people do?

(Mike Hicks inspired what I'm about to say)

- treat the programming language as having a central place in solving computing problems.
- reason rigorously about what programs do (software behavior)