CSE 374: Programming concepts and tools

Autumn 2023

Instructor: Megan Hazen

What is this course?

CSE 374 is a practical course about

- Command line tools and scripts to automate tasks
- C programming with explicit memory management
- Tools for programming
- Software engineering practice
- Basics of concurrency

374 is also

- An introduction about how to learn what you want to know to move forward.

Who are we?

Your instructor: Dr. Megan Hazen

Your TAs:
Aditya Bagaria, Adrian Avram, Alex Luo, Alex Xu, Aurora Yin, Emma Chen, Evan Zhao, Ray Li

Find contact information on the course webpage …
courses.cs.washington.edu/courses/cse374/23au/

Who are you?

~100 Students

What are your disciplines this quarter?

Students in 374 are also studying...

Tot  0

Who are you?

Concurrent Courses When taking the course	Declared Majors When taking the course
13% E E-496 (3.69)	**43%** electrical and comp engr
12% E E-201	**12%** informatics
11% CSE-417 (3.27)	**10%** electrical engr
10% E E-398 (3.78)	**8%** engineering undeclared
10% E E-469 (3.48)	**7%** pre science

Today

My job:

- ❏ About this course
- ❏ Lecture Set-up
- ❏ Schedule and homeworks
- ❏ Resources
  - ❏ TAs
  - ❏ Links on homepage
  - ❏ EdStem Discussion
- ❏ Course Rules

Your job:

- ❏ Find your resources
- ❏ Work on getting technology sorted out
- ❏ Post on Ed for help

If you are looking at this slide during a live or recorded lecture...

GOOD NEWS

You have figured out how to attend or view class. If you are viewing this slide as a PDF, please check on Canvas to make sure you can find lecture recordings or meetings.
Still having trouble? Check out the EdStem discussion, or email cse374-staff@cs for help.

Office Hours Schedule

We are still working on this. There will be some regular times, and also some ability to schedule ad hoc meetings. Office hours will be updated on the course calendar

25	26	27 09:30-10:20 Lecture CSE2 G10 *Orientation*	28	29 09:30-10:20 Lecture CSE2 G10 *Introduction to Linux* 10:30-11:30 OH Megan CSE1 212

October

Monday	Tuesday	Wednesday	Thursday	Friday
02 09:30-10:20 Lecture CSE2 G10 *I/O Redirection and alias* 10:30-11:30 OH Alex X CSE1 4th floor Breakout 12:30-1:30 OH Ray TBD 23:59 PRACTICE HW-Intro	03 14:30-15:30 OH Evan Gates Center 152	04 09:30-10:20 Lecture CSE2 G10 *Introduction to scripting* 10:30-11:30 OH Aditya TBD	05 11:00-12:00 OH Emma CSE1 5th floor Breakout 15:00-16:00 OH Alex L TBD	06 09:30-10:20 Lecture CSE2 G10 *Scripting Continued* 15:00-16:30 OH Adrian and Aurora CSE1 5th floor Breakout 23:59 PRACTICE HW0 due;

Course requirements

Lecture Monday, Wed., Friday 9:30-10:20 am

- Practice problems
  - Shorter homeworks assignments due frequently
  - 1-2 per week
- Projects
  - More involved homework on major topics
  - 1 scripting, 2 C,

What to expect

You are responsible for material on webpage. Follow links for more information.

Assignments may be more open ended than you are used to.

Learning how to learn is part of the plan

- Get used to looking at documentation and searching for answers
- Plan to understand, not just re-create
- Tinker -expertise comes from experience

Course Resources

Instructor and TAs

- Office hours TBD, but frequently.
- Use office hours to get ‘unstuck’

Edstem Discussion Group

- For each assignment plus more!

Communications: Edstem or email cse374-staff@cs

https://courses.cs.washington.edu/courses/cse374/23au,

Resources list, ‘man’ pages, Google

- Use Google as a starting place, be sure you understand
- Use formal references for more detail
- Recreate on your own; don’t just cut-and-paste

Tinker: Try things, experiment with new tools

Ask questions early and often!

Lectures

Attend for active learning

- Plan to learn big picture approaches and concepts
- Jot down key words and ideas to look up later

Advice: plan to be an active learner

- review notes, look up documentation, try ideas in the same day
- ask questions early and often

Active classes

If possible, bring your laptop to class. Try things out as we go.

Review materials BEFORE class.

Subscribe to this calendar (google, iCal, etc.)

March

	Monday	Tuesday	Wednesday	Thursday	Friday	
28	29 10:30-11:20 Lecture * * *Orientation & Distance Learning* Slides	30	31 10:30-11:20 Lecture * * *Using Linux* Slides	01	02 10:30-11:20 Lecture * * *Flipped Classroom HW0* Look here for resources Emacs motivation	

Attendance

Universal design for learning is used to make this course accessible

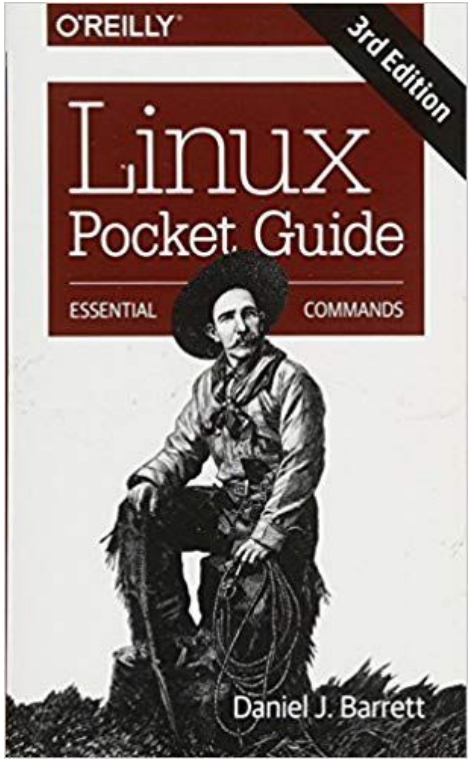
Including for those who can not attend a specific class

However,

Students who attend more classes

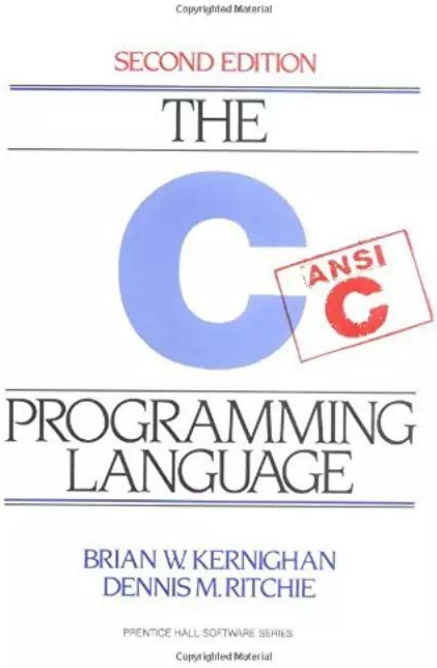
- stay on top of the material
- learn more
- .. have more fun?

Books



Web searches provide great starting places, and good short reminders

For context and understanding nothing beats a book



Academic Integrity

https://cs.washington.edu/academics/misconduct

Policy on the course webpage

Do your own work, be ready to explain it

Integrity is everything - have high standards

Unless otherwise specified all work in this course is independent

- Do not share code; discuss approach

When in doubt - ask and be honest

Academic Integrity

https://cs.washington.edu/academics/misconduct

Rule 1: You must indicate on your submission any assistance you received. ***Comment in code!***

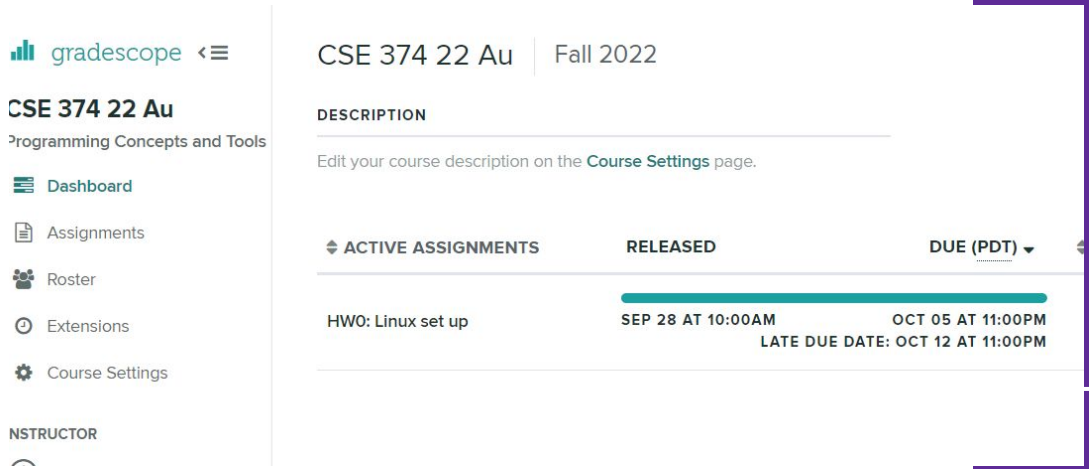
Rule 2: You must not share actual program code with other students.

Rule 3: You must not look at solution sets or program code from other years, nor should you make your own solutions publicly available even after the due date.

Rule 4: You must be prepared to explain any program code you submit.

Rule 5: Modifying code or other artifacts does not make it your own.

Submission (Hws)



Most homeworks are submitted via Gradescope, which has an autograder functionality.

The autograder is useful, but not perfect! Use it as a check, not a solver.

When you submit a homework you may resubmit it for a better score with the autograder.

Sometimes there is also a manually graded portion; Each homework will be manually graded once, after the initial due date.

Late Policy (Hws)

Turn things in on time
Plan ahead

Due Dates are not suggestions, if you fall behind on homework it can be hard to catch up.

Each student gets 10 free ‘late days’. You may use up to 2 ‘late days’ on any assignment; weekends don’t count.

Homeworks turned in early may be resubmitted for a better grade.

May drop one Practice Problem HW

(Contact instructor for truly exceptional circumstances; before deadline if possible.)

Major Ideas of 374

1. Command line and scripting tools
    a. Linux, Bash, automation
2. C programming and memory management
    a. Lower level than Java
3. Tools for programming
    a. Compilers, debuggers
4. Software development and testing
    a. Software specs, tests, and teamwork
5. Concurrency
    a. Using multiple processors at once

Your job

- Explore the syllabus and tools
  - Look forward at the due dates
  - Hint: Try looking around the course webpage
- Go to EdStem and participate in the first discussion
- Stay in touch - let us know how its going
- Deep breaths

When poll is active, respond at **pollev.com/meganuhazen914**

Text **MEGANUHAZEN914** to **22333** once to join

How are you feeling about this course?

Tot 0