

# CMSC216: Course Mechanics

Chris Kauffman

*Last Updated:  
Thu Jan 23 12:26:22 PM EST 2025*

# Immediate Logistics

**First course meeting is Tue 28-Jan in IRB-0324**

- ▶ Discussion **do not meet on Mon 27-Jan**
- ▶ Discussion will meet on Wed 29-Jan

# Overview of Mechanics: See Syllabus for Details

## ELMS/Canvas Homepage

Links to course schedule, staff contact, setup guide, surveys, etc.

## Lectures

- ▶ 2x per week, 75 minutes
- ▶ Chat, Exercises
- ▶ Earn Bonus Engagement Points
- ▶ All Lectures Recorded
- ▶ 2 exams and a final

## Assignments: Gradescope

- ▶ Weekly HW + Lab Exercises, collaborate freely
- ▶ Projects: 5 planned, larger programs, **individual work**

## Engagement Points

Each Lab is 1, Bonus via Lecture / Piazza, worth 1% per point, 10% overall + extra credit

## Submitting Projects Late costs Engagement Points

## Discussion / Labs

50min on Mon/Wed, see lab demos, get TA help on assignments

## Office Hours

Mostly In-Person, Some Online via Discord, see ELMS/Canvas for times + locations

## Piazza Discussion board

Async Questions/Answers, Students ask, Staff Answer  
Students answering other Students earns Engagement Points

# Lab01 and Programming Environment

## First Discussion/Lab meet is Wed Jan 29-Jan

- ▶ Lab01 is designed to make sure that you are set up to program for the course
- ▶ Staff give demos/overview/tips then students work in groups or individually to solve exercises; Staff give help as needed
- ▶ Get Credit for lab by submitting completed work to Gradescope: can submit as a group
- ▶ Make sure to **ask for help during lab** if you feel lost. We have *experienced and awesome TAs this semester* who can get you over hurdles.

## Lab01 Preparation

1. Look at the [Coding Environment Setup Guide](#) to learn how to access a Linux environment for coursework
2. Come in person to your assigned discussion time
3. Bring a laptop or other device capable of computing or plan to make a friend to work together

# Lectures and Hot Seats

- ▶ Most lectures will take place in-person on campus
- ▶ **Some lectures** may take place on Zoom due to extenuating circumstances (illness, travel, family emergencies)
- ▶ During Lecture, Kauffman will have **Exercises**
- ▶ Students will chat each other up about the exercises
- ▶ On resuming, discuss answers with 1-2 folks, usually volunteers, alternatively victims selected from the “Hot Seats” (first few rows of lecture hall or randomly when online)
- ▶ Showing effort earns **Bonus Engagement Points**
- ▶ Students are encouraged to ask questions when prompted
- ▶ **Lectures are recorded and posted** for students that can't make it to the synchronous meeting or want to review later

# Office Hours: In-person and Zoom

- ▶ Office Hours are open to all students, no appointments needed
- ▶ Times and locations vary, listed on Canvas
- ▶ Helps to come **prepared** to office hours: specific question, things you've tried to fix bugs; may lose time if not prepared

## In-person Office Hours

- ▶ Have a physical location (AVW 4166)
- ▶ Usually have Queue: physical line, whiteboard or paper list

## Online Office Hours

- ▶ Will attempt to have some staff hold online office hours via Zoom
- ▶ Office hours schedule will include these along with a link to attend online office hours

# Communication

## Piazza: Discussion Board

- ▶ Questions on any course matter, project help etc.
- ▶ Announcements from Staff
- ▶ Read the Etiquette Post so you can post Answerable Questions

## Gradescope

- ▶ Lab and HW quizzes
- ▶ Submit Projects
- ▶ Receive Exam Grades
- ▶ Request Regrades on submitted work

## Email Kauffman for

- ▶ Appointments outside of office hours
- ▶ Personal illness, emergencies, accommodation requests, missing exams
- ▶ Don't use ELMS/Canvas messages or Private Piazza posts - I won't always see them
- ▶ Email directly about personal issues

**You don't need to notify anyone if you just miss a lecture**

# Reading

## Computer Systems: A Programmer's Perspective

- ▶ **3rd Edition** which covers 64-bit arch rather than 32-bit
- ▶ Author: R. Bryant and D. O'Hallaron,
- ▶ **REQUIRED**: it's expensive but an *excellent* text which will serve you well (if you read it)

## C Programming

- ▶ Likely you'll want to do some reading on C programming to supplement in-class discussion
- ▶ *C Programming Language* Second Edition by Brian Kernighan and Dennis M. Ritchie,
  - ▶ **Optional**: not a bad read from the original authors of C
- ▶ Free web resources on C coding at bottom Canvas front page



# Goals for the Course

- ▶ Include C and Assembly on your resume and back it up
- ▶ Understand how all high-level programming languages interact with the machine on which they run
- ▶ Get the outline of what hardware is in a computing system
- ▶ Gain familiarity with the software abstractions of hardware that all Operating Systems provide
- ▶ Deepen debugging skills mainly through skill with debugger
- ▶ Become comfortable with working on the command line and on a remote computer

# Prime Directive and Academic Integrity

**PRIME DIRECTIVE:** Be able to explain your own work including homework code and exam solutions. The work you submit should be the product of your own effort and reflect your personal understanding.

Follow this because...

*... I can say that at my workplace I've seen more than one freshout who clearly hadn't made it through college without significant assistance from Stack Overflow and other people's blogs. None of them lasted very long. Perhaps knowing how to solve problems for yourself isn't necessary to get a college degree nowadays, but it's surprising how useful it can be in **a career where you solve problems for a living.***

*– [bunderbunder](#), discussing using StackOverflow to cheat*

# Academic Integrity from Fall 2024

Count	Approximate # of students in Kauffman 216 sections
534	Students enrolled at end of semester
72	Students Pursued for Academic potential Integrity violations
2	Student explained their work showing ownership
66	Students admitted guilt and were sanctioned
4	Cases still being processed by the Office of Student Conduct
Many	Tears, regrets, wishes to go back and just take a lower grade

## Most common vectors

- ▶ Over-sharing project code with a fellow student
- ▶ Use of AI tool like ChatGPT or Autopilot
- ▶ Combination of the above
- ▶ “I shared my code to help them, they promised they wouldn’t submit it as their own.”

Learn from the mistakes of others: *Easily Copied, Easily Detected*

# Expectations

## Kauffman can

- ▶ Provide guidance, entertainment, information, challenge
- ▶ Will do all of those in lecture, office hours, assignments, exams

## Kauffman cannot

- ▶ Force you to pay attention, do your HW, attend labs, read, ask when you don't know, practice, learn.
- ▶ Cannot force you to **CARE**, the critical factor in any endeavor.
- ▶ Caring leads to effort. Effort leads to improvement. Constant improvement leads to success.

## Kauffman's Expectation

- ▶ You care at least a little bit and will cultivate an attitude of curiosity and engagement
- ▶ You will put some effort into our time together as I have

# Do you Care?



*This is my big gripe with LLMs\* in general: that LLMs don't care.. they can't care... they do what they're told, maybe, whereas like a junior [dev], they care. They go "oh, actually it was off by one pixel so I actually just went into the code base without anyone telling me and I aligned it better"... and you're like, "Hey, you care! I love it that you care!"*

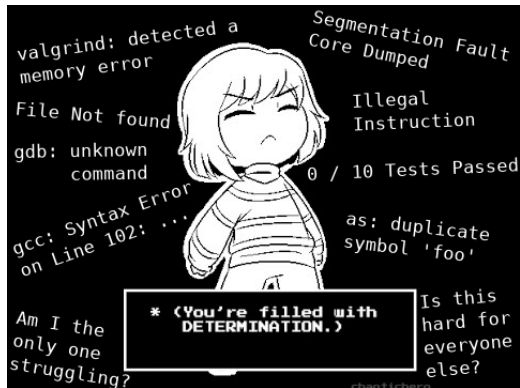
ThePrimeagen (Michael B. Paulson),  
"Devin Is A Lie?"

Using a forklift to move weights will not make you stronger. Riding a horse will not make you run more quickly. Copying and pasting someone's story will not make you a better writer.

*Why would you pay for a computing course to train you and then let a tool rob you of the practice? **You won't if you care.***

\*LLM: Large Language Model, an AI tool trained to produce natural language and code answers to queries.

# Don't Give Up, Stay Determined!



Students have different experience levels. Some have lots and make things look easy. For others, everything is new and intimidating. No one knows all of this stuff. Everyone struggles at some point. Get help from the staff. Support each other. Your peers will remember when you help them move forward and when you try to hold them back.

**Respect and learn from one another.**