CMSC216: Course Mechanics

Chris Kauffman

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Immediate Logistics

First course meeting is Lecture on 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

General 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
- Outline what hardware is in a computing system and some basic principles that govern it
- Gain familiarity with the software abstractions of hardware that all Operating Systems provide
- Deepen debugging skills through working with a debugger and learning to fix problems in one's own code
- 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?

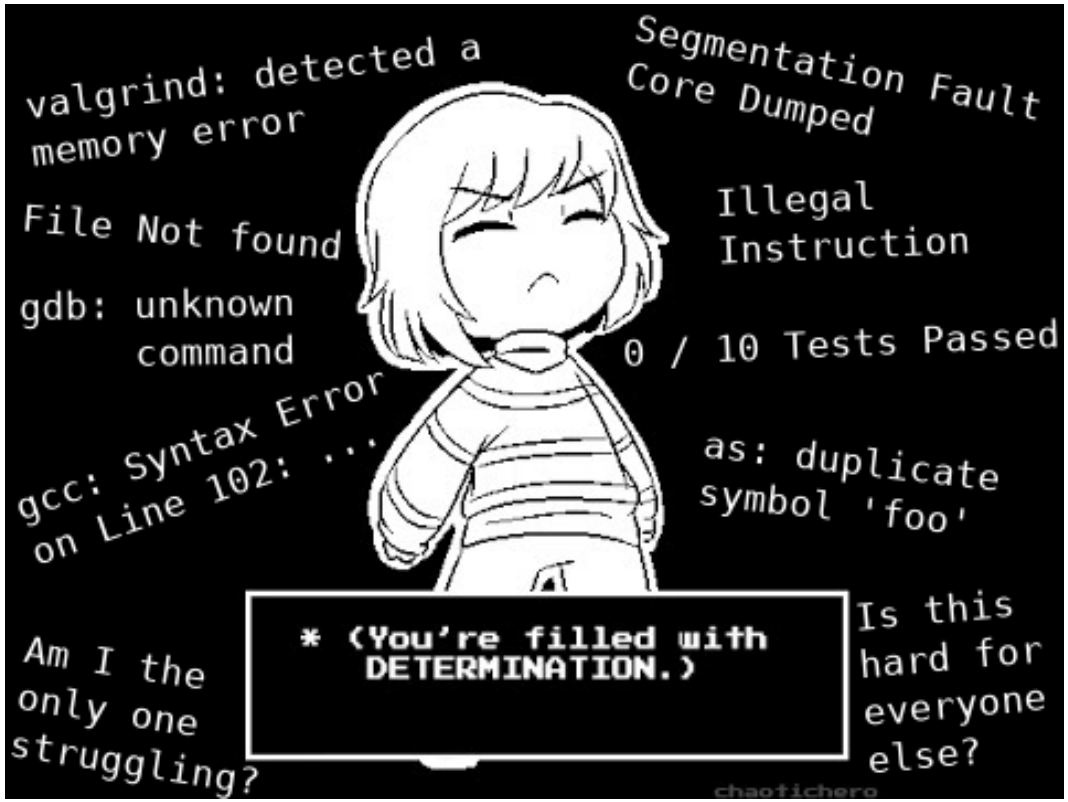
This is my big gripe with LLMs in general: that LLMs don't care.. they can't care... they do what they're told, maybe, whereas like a junior [dev], they care. They go "oh, actually it was off by one pixel so I actually just went into the code base without anyone telling me and I aligned it better"...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