EECS 388 – Embedded Systems Lab

Spring 2023

In EECS388 labs, you will learn how to use microcontrollers and embedded processors for interacting with the physical environment using I/O devices. Below are the (tentative) lab topics:

-Introduction to C programming

- Introduction to the embedded software development environment

- Sensor reading

- Servo motor control

- Timers

- Introduction to embedded Linux

- Linux scheduler

- Real-time DNN inference

- Self-driving car(Project)

Each student needs to attend one lab section every week. All students can access their lab documents and instructions from Canvas. You will be using HiFive1 and Raspberry Pi4 microcontroller boards for your lab works. For each of the labs, you must show the lab demo to your respective TA and submit your codes in Canvas. The score distribution of the lab is mentioned here:

Lab Demo and answering questions	50%
Code submission	50%
Not attending Lab(Penalty)	-30%
Late submission for each day	10%/each day

We will follow the below rules for this EECS-388 lab

1) We have 8 lab assignments and 1 project for this semester.
2) Each Lab assignment will be published by starting of every week (Monday).
3) Everyone should submit their assignment within 1 week from their assignment date or Lab session start date.
4) Attendance is mandatory and In-person. Everyone should present to the lab on time and if you fail to show up for the planned lab, 30% of your assignment mark will be forfeited. Only justifications supported by credible evidence will be considered.
5) All lab assignments submitted in this course except group projects must be done independently without assistance from anyone. Anyone suspected of cheating (e.g., copying from someone else's coding) will be reported and receive zero credit.
6) Everyone should submit their Lab assignment on Canvas.

7) If you are unable to attend any Lab then please inform Professor and respective TA before Lab Session with proper proof.
8) You are allowed to do the lab when there is no other scheduled lab or take help during office hours.
9) It is preferred to show a demo before leaving the Lab. Your attendance will be counted.
10) Attendance does not earn extra points, however missing the planned lab will result in a 30% deduction from each lab grade.

Deadline and Late Submission

The deadline for the Demo and code submission will be prior to the beginning of your lab next week. For example, the students of the Monday 10 AM lab group must submit their work within the Monday 9:59 AM of the next week. If a student fails to submit her/his final version of the code before the deadline, the student is still able to submit the code with a penalty taken off that lab grade. The penalty for late lab submission is 10% per late day.

Academic misconduct

Students should not share their homework, lab code, and lab report with others or copy other students' codes or reports. In the case of plagiarism, we follow the university policy for academic misconduct: http://provost.ku.edu/memos/20090814

Attendance policy

You should not physically attend the labs only if you feel extremely sick, have tested positive for COVID, or have been around someone who has tested positive, and you must communicate with the instructor or your respective TA regarding this.