Lecture 01 (Introduction)

1 Course Plan

1. Will have assignments :')
2. Prereq is COL216 and COL331
3. C/Python programming

(sir is also learning about teaching the course this sem)

2 Grading

1. Minor - 15
2. Major - 25
3. Assignments - 5 + 10 + 10
4. Paper reading - 5
5. Project (hardware based)
    i. Proposal - 5
    ii. Midterm report - 5
    iii. Midterm PPT - 5
    iv. Final report - 10
    v. Final PPT - 5

3 Reading Material

Seshia (book) - chapters 8-12 and 17

4 Collaboration

1. Strongly encouraged :)
2. Discuss the solution of assignments
3. Just don't copy!

5 What are Embedded Systems?

1. Specific purpose devices
2. Examples are: car, airplane, drone, printer, TV, fridge, wearables, video game controller
3. Limited resources such as storage, computation and communication

6 Course Objectives

1. Learn about embedded systems
2. Design techniques for efficient usage of the limited resources
3. Develop practical real world systems

7 Syllabus

1. Embedded platforms
2. Embedded processor architecture
3. Embedded OS
4. Device drivers
5. Real-time scheduling
6. Memory management
7. ML applications - graphic acceleration
8. Security - trusted computing