CS 23302  Robotics and Embedded System Lab 1  2 credit hours

Instructor’s Name: Jong-Hoon Kim

Course Materials: Online notes and tutorials

Course Catalogue:

Prerequisites or co-requisites: minimum grade of C (2.000) or better in CS 13011. Required (BS-RES), elective (BS-other)

Topics to be Covered:
Course Goals
1. Electronic basic
2. Basic electrical components
3. Digital I/O and their applications
4. Analog I/O and their applications
5. Sensors and Sensing
6. Open/Closed Loop Control
7. 3D Printing & PCB design

Learning Outcomes:
1. Understanding electronic basic
2. Familiar with electrical components
3. Learn microcontroller architecture
4. Design embedded system
5. Learn noise reduction algorithm
6. Learn control mechanism
7. Design device protocol
8. Design a PCB board
9. Learn a 3D Printing

Learning Outcomes Assessment:
1. A small program with hardware components in Each lab
2. Bi-weekly moderately large programs
3. One semester programming projects
4. Weekly Discussion Board Responses.