Week 8

November 19, 2018

Next Quarter: ENGR 7B


- Lec A, 1 Lecture + 1 Lab/Week
  - Quadcopter with Autonomous Delivery – to autonomously deliver payloads by sensing a specific distance range using ultrasonic sensor and a specific color using a vision sensor. Teams will be re-grouped to re-design quadcopters with added sensors and microcontrollers, and mechanisms for payload release.

    - Sensors (Ultrasonic, IMU)
    - Vision Sensor/Camera
    - Arduino Microcontroller
    - Programming (Basic C)
   - 3D Printing
    - Entrepreneurship

Next Quarter: ENGR 7B

- Lec B (Lab B1 and B2)

  - Fitness Tracker – To build your own version of "Fitbit" for step and elevation counting by utilizing different sensors and using App Inventor to create your customized App. This project is under the Health section of Grand Challenges.

    - Sensors (Accelerometer, Pressure Sensors, etc.)
    - Microcontroller Arduino Pro Mini
    - Programming
    - 3D Printing
    - Battery Making
    - App Writing
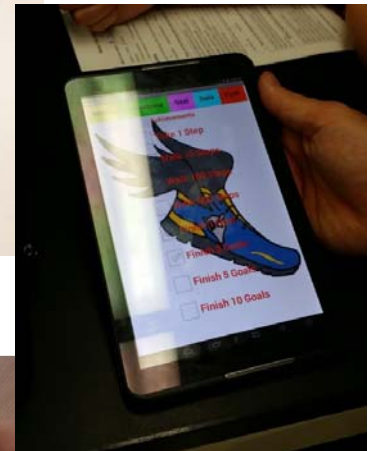
Next Quarter: ENGR 7B

- Lec C (Lab C1 and C2)
    - Lab-on-a-Chip/Microfluidics – A portable hand-held detector that can diagnose the unknown concentration of fluorescein solution via a microfluidic device. Such devices can be applied to medical diagnosis or detection of toxins in remote areas. This project is under the Health and Environment section of Grand Challenges.
        - Sensors (RGB)
        - Nanotechnology
        - Microfabrication
        - Microcontroller Arduino
        - 3D Printing
        - Concentration Detection
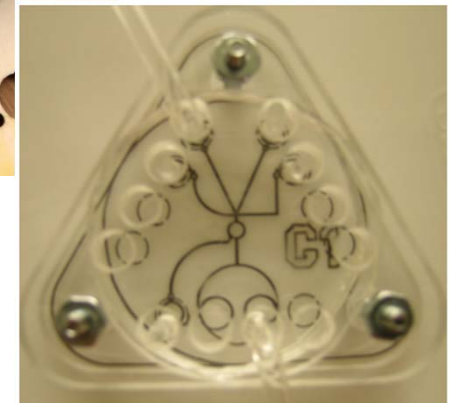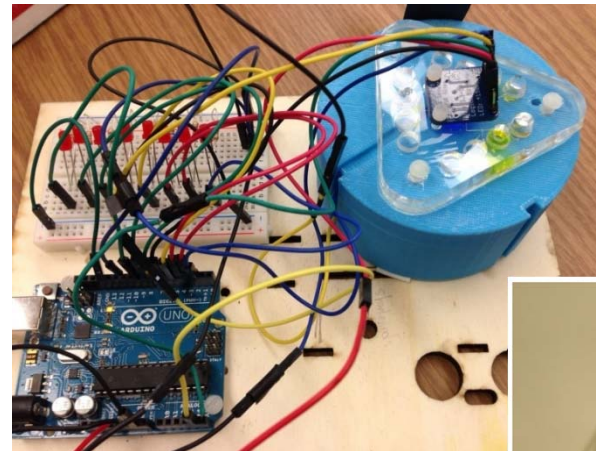
Project Report Template

- See Project Report Template pdf file on Canvas

Upcoming Schedule

Next lecture – Monday 11/26/2018 we will have a guest speaker Iris Adam who will discuss the development of communication and leadership skills.

Design Report Due 12/13/18 (Th) at 5pm in room ET 408 in the box labeled with your section (A/B or C)