EECE 456 EMBEDDED SYSTEMS DESIGN LAB – SPRING 2017 ELECTRICAL AND COMPUTER ENGINEERING, HOWARD UNIVERSITY WEDNESDAYS 2:10 – 5:00PM @ LKD 1002

- Catalog Data: EECE456 Embedded Systems Design Lab: This course is for lab/project based computer system design and implementation for all level of students with some background in digital systems and programming. The platforms of the class are Texas Instruments MSP432 board (with accessories and booster packs). However, others platforms such as Arduino and its varieties may be allowed, upon students' request, to interface with the primary platform for one's specific project and responsibilities. Basic system design method will be introduced along with timelines and project management followed by student (or team) schedule and weekly progress reporting duties.
- Instructor: Dr. Charles Kim, LKD #3014 202-806-4821 <u>CKIM@HOWARD.EDU</u> Office hours: 2 – 4 TR
- Course Technical Assistant: TBD
- Textbook: None
- Pre-Requisite: Digital System or Instructor's approval
- Lab Course >> Mobile Lab Course >> Lab hours are used primarily for <u>Demo of the lab of the week (already finished before)</u>; actual work and Demo of the lab for the week during the lab hours are not encouraged.
- Schedule for the first 4 weeks
 - WK1 W Jan 11 :(1) Class Introduction; (2)Form 2-person groups; (3) Platform Distribution, and (4) By Group Going through tutorial/info and do **Lab0**;
 - WK2 W Jan 18: (1) Lab0 Demo; (2) Review on Lab0 and Preparedness for the rest of the labs.
 - WK3 W Jan 25: (1) Lab1 Demo
 - WK4 W Feb 1: (1) Lab2 Demo¹, (2) Lab1 Report submission
- Grading Policy
 - Lab Demo Check: 40%
 - Lab Reports 40% <u>Submit a hardcopy AND electronic copy every Wednesday before the class starts for the lab done the week before</u>. **No late report will be accepted**.
 - Project (with a Project report) 10 %
 - Final Exam 10 % To measure if you know what you have done with the Labs.
 - Others (Assignments) 10 %
 - Attendance 5 %

A>90 90>B>79 80>C>69 70>D>59 F<60

- Class Website: WWW.MWFTR.COM/embS17.html
- W Jan 11 F Jan 13: Platform Pickup after group formation
- Lab0:

After basic understanding of the TMP432 board ("Board") (through the Class note website and/or Web search) and thorough familiarity with what first to do in your computer and installation of the software development tool/kit so that the computer recognizes the Board, when connected via USB or mini-USB, (1) run a sample code (available from the software development kit/tool) of on-board LED blinking and see if it works, and be ready for Lab0 demonstration scheduled on W Jan 18.

¹ Demo: Demo without all group members present would not be performed nor accepted. All members should be present.